

# Sequence Listing



<110> Genentech, Inc.  
 Eichen, Ian L.  
 Filvaroff, Ellen  
 Gerritsen, Mary E.  
 Goldward, Audrey  
 Golowski, Paul J.  
 Grimaldi, Christopher J.  
 Jarney, Austin L.  
 Katschke, Colin K.  
 Wren, William I.

<100> ACCEPTED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC  
 ACIDS ENCODING THE SAME

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<140> US 6,000,000

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<150> PCT/US99/01002

<151> 1999-04-28

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<150> PCT/US00/14042  
<151> 2000-05-22

<156> US 60/209,832  
<157> 2000-06-05

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35 40 45

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50 55 60

Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr  
65 70 75

Lys Gln Val His Ala Leu Ser Pro Glu Gln Asn Val Ile Ile Lys  
80 85 90

Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly  
95 100 105

Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala  
110 115 120

His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr  
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Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile  
140 145 150

His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp  
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Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu  
170 175 180

His Ser Gly Asn Phe Gly Thr Asp Leu Gln Gln Lys Leu His Trp  
185 190 195

Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala  
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215 220 225

Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Gln Ala Asn  
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 35 40 45  
 Val Thr Phe Ala Phe Ser Cys Thr Met Phe Glu Leu Ile Ile Ile  
 50 55 60  
 Glu Ile Leu Gly Val Leu Asn Ser Ser Ser Arg Tyr Phe His Trp  
 65 70 75  
 Lys Met Asn Leu Cys Val Ile Leu Leu Ile Leu Val Phe Met Val  
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 Phe Phe Tyr Ile Gly Tyr Phe Ile Val Ser Asn Ile Arg Leu Leu  
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 His Lys Gln Arg Leu Leu Phe Ser Cys Leu Leu Trp Leu Thr Phe  
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 Ala Val Asn Cys Phe Tyr Thr Tyr Met Ser Tyr Phe Leu Arg Asn  
 170 175 180  
 Val Thr Asp Thr Asp Ile Leu Ala Leu Gln Arg Arg Leu Leu Gln  
 185 190 195

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Arg Arg Thr Met	Phe Gln Lys Gly Glu	Val His Asn Lys Pro Ser	215	220	225
Gly Phe Trp Gly	Met Ile Lys Ser Val	Thr Thr Ser Ala Ser Gly	220	225	230
Ser Glu Asn Leu	Thr Leu Ile Gln Gln	Gln Val Asp Ala Leu Gln	230	235	235
Gln Leu Ser Arg	Gln Leu Phe Leu Glu	Thr Ala Asp Leu Tyr Ala	235	240	240
Thr Lys Glu Arg	Ile Glu Tyr Ser Lys	Thr Phe Lys Gly Lys Tyr	240	245	245
Phe Asn Phe Leu	Gly Tyr Phe Phe Ser	Ile Tyr Cys Val Trp Lys	245	250	250
Ile Phe Met Ala	Thr Ile Asn Ile Val	Ile Asp Arg Val Gly Lys	250	255	255
Thr Asp Pro Val	Thr Arg Gly Ile Glu	Ile Thr Val Asn Tyr Leu	255	260	260
Gly Ile Gln Phe	Asp Val Lys Phe Trp	Ser Gln His Ile Ser Phe	260	265	265
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Ile Thr Leu Thr	Lys Phe Phe Tyr Ala	Ile Ser Ser Ser Lys Ser	270	275	275
Ser Asn Val Ile	Val Leu Leu Leu Ala	Gln Ile Met Gly Met Tyr	275	280	280
Phe Val Ser Ser	Val Leu Leu Ile Arg	Met Ser Met Pro Leu Glu	280	285	285
Tyr Arg Thr Ile	Ile Thr Glu Val Leu	Gly Glu Leu Gln Phe Asn	285	290	290
Phe Tyr His Arg	Trp Phe Asp Val Ile	Phe Leu Val Ser Ala Leu	290	295	295
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<213> Homo Sapien

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 013 Homo Sapien

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 Cys Arg Leu Leu Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu  
 65 70 75  
 Thr Ala Leu Lys Ala Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val  
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 Gly Asp Gly Phe Val Val Ile Ser Arg Ile Ser Pro Asn Pro Lys  
 95 100 105  
 Cys Gly Lys Asn Gly Val Gly Val Leu Ile Trp Lys Val Pro Val  
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 Thr Asn Ser Cys Ile Pro Glu Ile Ile Thr Thr Lys Asp Pro Ile

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Pro Thr Thr Thr Pro Pro Ala Pro Ala	Ser Thr Ser Ile Pro Arg	
185	190	195
Arg Lys Lys Leu Ile Cys Val Thr Glu	Val Phe Met Glu Thr Ser	
200	205	210
Thr Met Ser Thr Glu Thr Glu Pro Phe	Val Glu Asn Lys Ala Ala	
215	220	225
Phe Lys Asn Glu Ala Ala Gly Phe Gly	Gly Val Pro Thr Ala Ile	
230	235	240
Leu Val Leu Ala Leu Leu Phe Phe Gly	Ala Ala Ala Gly Leu	
245	250	255
Phe Cys Tyr Val Lys Arg Tyr Val Lys	Ala Phe Pro Phe Thr Asn	
260	265	270
Lys Asn Gln Gln Lys Glu Met Ile Glu	Thr Lys Val Val Lys Glu	
275	280	285
Glu Lys Ala Asn Asp Ser Asn Pro Asn	Glu Glu Ser Lys Lys Thr	
290	295	300
Asp Lys Asn Pro Glu Glu Ser Lys Ser	Pro Ser Lys Thr Thr Val	
305	310	315
Arg Cys Leu Glu Ala Glu Val		
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 0212: DNA  
 0213: Homo Sapien

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#110 - 8  
#111 - 350  
#112 - EFT  
#113 - Homo Sapien

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35 40 45  
Thr Leu Asn Glu Met Phe Arg Glu Val Cys Glu Leu Met Glu Asp  
50 55 60  
Thr Gln His Lys Leu Arg Ser Ala Val Glu Glu Met Glu Ala Glu  
65 70 75  
Glu Ala Ala Ala Lys Ala Ser Ser Glu Val Asn Leu Ala Asn Leu  
80 85 90  
Pro Pro Ser Tyr His Asn Glu Thr Asn Thr Asp Thr Lys Val Gly  
95 100 105  
Asn Asn Thr Ile His Val His Arg Glu Ile His Lys Ile Thr Asn  
110 115 120  
Asn Gln Thr Gly Gln Met Val Phe Ser Glu Thr Val Ile Thr Ser  
125 130 135  
Val Gly Asp Glu Glu Gly Arg Arg Ser His Glu Cys Ile Ile Asp  
140 145 150  
Glu Asp Cys Gly Pro Ser Met Tyr Cys Gln Phe Ala Ser Phe Gln  
155 160 165  
Tyr Thr Cys Gln Pro Cys Arg Gly Gln Arg Met Leu Cys Thr Trp  
170 175 180

Asp Ser Glu Cys	Cys Gly Asp Gln Leu Cys Val Trp Gly His Cys	185	190	195
Thr Lys Met Ala Thr Arg Gly Ser Asn Gly Thr Ile Cys Asp Asn		200	205	210
Gln Arg Asp Cys Gln Pro Gly Leu Cys Cys Ala Phe Gln Arg Gly		215	220	225
Leu Leu Phe Pro Val Cys Thr Pro Leu Pro Val Glu Gly Glu Leu		230	235	240
Cys His Asp Pro Ala Ser Arg Leu Leu Asp Leu Ile Thr Trp Glu		245	250	255
Leu Glu Pro Asp Gly Ala Leu Asp Arg Cys Pro Cys Ala Ser Gly		260	265	270
Leu Leu Cys Gln Pro His Ser His Ser Leu Val Tyr Val Cys Lys		275	280	285
Pro Thr Phe Val Lys Ser Arg Asp Gln Asp Gly Glu Ile Leu Leu		290	295	300
Pro Arg Glu Val Pro Asp Glu Tyr Glu Val Gly Ser Phe Met Glu		305	310	315
Glu Val Arg Gln Glu Leu Glu Asp Leu Pro Arg Ser Leu Thr Glu		320	325	330
Glu Met Ala Leu Gly Glu Pro Ala Ala Ala Ala Ala Ala Leu Leu		335	340	345
Gly Gly Glu Glu Ile		350		

<10> 9  
 <11> 1395  
 <12> DNA  
 <13> Homo Sapien

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 tgttcgtctt ccaggggtac tcattccaaag gctaatcca acgtttctgtc 150  
 ttcaatctgc aaatctctgg ggtcctgggg ctctctgga cctttaactg 200  
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 gcttcctccc gcacacccg ttaccacaact gggtcattgg catttggaga 350  
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 ggggttccct cagagagga cagagagagga taacccctct cactatggga 450  
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 ccgcaatgca tacatcatga tcgcctctc aggggaagaat ttctgtctct 550



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1100 10  
 1110 301  
 1120 PBT  
 1130 Himo Saplen

1400 10  
 Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile  
 1 5 10 15  
 Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Lys  
 20 25 30  
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 35 40 45  
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly  
 50 55 60  
 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val  
 65 70 75  
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro  
 80 85 90  
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr  
 95 100 105  
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu

110	115	120
Thr Leu Val Gln	Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His	
115	130	135
Lys Leu Arg Gly	Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys	
140	145	150
Cys Phe Lys Cys	Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe	
155	160	165
Leu Asn Arg Asn	Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn	
170	175	180
Phe Cys Val Ser	Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn	
185	190	195
Ile Val Arg Val	Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu	
200	205	210
Phe Phe Gly Lys	Leu Leu Val Val Gly Gly Val Gly Val Leu Ser	
215	220	225
Phe Phe Phe Phe	Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Thr	
230	235	240
Lys Ser Pro His	Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser	
245	250	255
Ile Leu Gly Ala	Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Ile	
260	265	270
Gly Met Cys Val	Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu	
275	280	285
Glu Arg Asn Asn	Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys	
290	295	300
Ser Leu Leu Lys	Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp	
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Asn Lys Lys Arg	Lys Lys	
320		

<110> 11  
 <111> 1901  
 <112> DNA  
 <113> Homo Sapien

<400> 11  
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 ctctgcccc tgcattctgt gaagctgctg ccccgccagc cgcactcca 150  
 ccgtgagccg cctcatcttc acgtttcttc tcttcttggg ggtgctgggtg 200  
 ccacacatta tctctacccc ggggtggg agcagctat acagctggg 250  
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gccacggggg ccttcttctt cttctttttt accctgctca tgccttggtt 400  
 gaggagcaga cgggaacccc gggctggcat cagaaatggg ttttggttct 450  
 ttaagtctct gatctgggtg ggctcaccg tgggtgcctt ctacatccct 500  
 gacggctcct tcaccaacat ctggtctctc thgggggtcg tgggtcctt 550  
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 atcctgtgt tctgcccc ggtccaggac gcccagccca actcgggtct 850  
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 gtgggatgac ccagacttg tgggctcat cctcttctc ctgtgcacc 1050  
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 ctgagctct aagactttt ctaataaaca agcagtgcg tgraaaaaaa 1900

a 1901

0210: 12

0211: 437

0212: PPT

0213: Homo Sapien

0400: 12

Met Gly Ala Cys Leu Gly Ala Cys Ser Leu Leu Ser Cys Ala Ser  
1 5 10 15

Cys Leu Cys Gly Ser Ala Pro Cys Ile Leu Cys Ser Cys Cys Pro  
20 25 30

Ala Ser Arg Asn Ser Thr Val Ser Arg Leu Ile Phe Thr Phe Phe  
35 40 45

Leu Phe Leu Gly Val Leu Val Ser Ile Ile Met Leu Ser Pro Gly  
50 55 60

Val Glu Ser Gln Leu Tyr Lys Leu Pro Trp Val Cys Glu Glu Gly  
65 70 75

Ala Gly Ile Pro Thr Val Leu Gln Gly His Ile Asp Cys Gly Ser  
80 85 90

Leu Leu Gly Tyr Arg Ala Val Tyr Arg Met Cys Phe Ala Thr Ala  
95 100 105

Ala Phe Phe Phe Phe Phe Phe Thr Leu Leu Met Leu Cys Val Ser  
110 115 120

Ser Ser Arg Asp Phe Arg Ala Ala Ile Gln Asn Gly Phe Trp Phe  
125 130 135

Phe Lys Phe Leu Ile Leu Val Gly Leu Thr Val Gly Ala Phe Tyr  
140 145 150

Ile Pro Asp Gly Ser Phe Thr Asn Ile Trp Phe Tyr Phe Gly Val  
155 160 165

Val Gly Ser Phe Leu Phe Ile Leu Ile Gln Ile Val Leu Leu Ile  
170 175 180

Asp Phe Ala His Ser Trp Asn Gln Arg Trp Leu Gly Lys Ala Glu  
185 190 195

Glu Cys Asp Ser Arg Ala Trp Tyr Ala Gly Ile Phe Phe Phe Thr  
200 205 210

Leu Leu Phe Tyr Leu Leu Ser Ile Ala Ala Val Ala Leu Met Phe  
215 220 225

Met Tyr Tyr Thr Glu Pro Ser Gly Cys His Glu Gly Lys Val Phe  
230 235 240

Ile Ser Leu Asn Leu Thr Phe Cys Val Cys Val Ser Ile Ala Ala  
245 250 255

Val Leu Pro Lys Val Gln Asp Ala Gln Trp Asn Ser Gly Leu Ile  
260 265 269

Gln Ala Ser Val Ile Thr Leu Tyr Thr Met Phe Val Thr Trp Ser

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Ala Leu Ser Ser	110 290	Pro Glu Gln Lys Cys Asn Pro His Leu Pro	300
Thr Gln Leu Gly	305	Ala Gly Pro Glu Gly Tyr	315
Glu Thr Gln Trp	320	Ile Val Gly Leu Ile	330
Phe Leu Leu Cys	335	Leu Arg Ser Ser Asp His	345
Arg Gln Val Asn	350	Glu Glu Cys Pro Pro Met	360
Leu Asp Ala Thr	365	Gln Val Ala Ala Cys Gln	375
Gly Arg Ala Phe	380	Gly Val Thr Tyr Ser Tyr	390
Ser Phe Phe His	395	Ala Ser Leu His Val Met	405
Met Thr Leu Thr	410	Gly Glu Thr Arg Lys Met	420
Ile Ser Thr Trp	425	Lys Ile Cys Ala Ser Trp	435
Ala Gly Leu Leu	440	Leu Val Ala Pro Leu Leu	450
Leu Arg Asn Arg	455		

0110: 13  
 0111: 1572  
 0112: DNA  
 0113: Homo Sapien

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<10> 14

<11> 234

<12> PFT

<13> Homo Sapien

<40> 14

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				20					25					30

Thr	Gln	Leu	Met	Ala	Arg	Ile	Glu	Ser	Tyr	Glu	Gly	Arg	Gln	Lys
				35					40					45

Lys	Gly	Ile	Ser	Asp	Val	Arg	Arg	Thr	Phe	Cys	Leu	Phe	Val	Thr
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Phe	Asp	Leu	Leu	Phe	Val	Thr	Leu	Leu	Trp	Ile	Ile	Glu	Leu	Asn	
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Val	Asn	Gly	Gly	Ile	Glu	Asn	Thr	Leu	Glu	Lys	Glu	Val	Met	Gln	
				80					85					90	
Tyr	Asp	Tyr	Tyr	Ser	Ser	Tyr	Phe	Asp	Ile	Phe	Leu	Leu	Ala	Val	
				95					100					105	
Phe	Arg	Phe	Lys	Val	Leu	Ile	Leu	Ala	Tyr	Ala	Val	Cys	Arg	Leu	
				110					115					120	
Arg	His	Irp	Trp	Ala	Ile	Ala	Leu	Thr	Thr	Ala	Val	Thr	Ser	Ala	
				125					130					135	
Phe	Leu	Leu	Ala	Lys	Val	Ile	Leu	Ser	Lys	Leu	Phe	Ser	Gln	Gly	
				140					145					150	
Ala	Phe	Gly	Tyr	Val	Leu	Pro	Ile	Ile	Ser	Phe	Ile	Leu	Ala	Trp	
				155					160					165	
Ile	Glu	Thr	Trp	Phe	Leu	Asp	Phe	Lys	Val	Leu	Pro	Gln	Glu	Ala	
				170					175					180	
Glu	Glu	Glu	Asn	Arg	Leu	Leu	Ile	Val	Gln	Asp	Ala	Ser	Glu	Arg	
				185					190					195	
Ala	Ala	Leu	Ile	Pro	Gly	Gly	Leu	Ser	Asp	Gly	Gln	Phe	Tyr	Ser	
				200					205					210	
Iro	Pro	Glu	Ser	Glu	Ala	Gly	Ser	Glu	Glu	Ala	Glu	Glu	Lys	Gln	
				215					220					225	
Asp	Ser	Glu	Lys	Pro	Leu	Leu	Glu	Leu							
				230											

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 <111> 2768  
 <112> DNA  
 <113> Homo Sapien

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 gtcttggccc caggaagaga aggaacaaaa gaaactggaa aggaagatgc 2600  
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 aaaagatgaa gtgtgaaa 2763

G10: 16  
 G11: 673  
 G12: FFT  
 G13: Hemo Sapien

G400: 16  
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu  
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 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys  
 20 25 30  
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
 35 40 45  
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe  
 50 55 60  
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu  
 65 70 75  
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser  
 80 85 90  
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu  
 95 100 105  
 Asp Leu Thr Ala Asn Arg Leu His Glu Ile Thr Asn Glu Thr Phe  
 110 115 120  
 Arg Gly Leu Arg Arg Leu Gln Arg Leu Tyr Val Gly Tyr Asn Arg  
 125 130 135  
 Phe Arg His Ile Gln Pro Gly Ala Phe Asp Thr Leu Asp Arg Leu  
 140 145 150

Leu Glu Leu Lys	Leu Gln Asp Asn Glu	Leu Arg Ala	Leu Pro	Pro	185
Leu Arg Leu Pro	Arg Leu Leu Leu Leu	Asp Leu Ser His	Asn Ser		189
Leu Leu Ala Leu	Glu Pro Gly Ile Leu	Asp Thr Ala Asn	Val Glu		195
Ala Leu Arg Leu	Ala Gly Leu Gly Leu	Gln Gln Leu Asp	Glu Gly		199
Leu Phe Ser Arg	Leu Arg Asn Leu His	Asp Leu Asp Val	Ser Asn		203
Asn Gln Leu Glu	Arg Val Pro Pro Val	Ile Arg Gly Leu Arg	Gly		209
Leu Thr Arg Leu	Arg Leu Ala Gly Asn	Thr Arg Ile Ala Gln	Leu		215
Arg Pro Glu Asp	Leu Ala Gly Leu Ala	Ala Leu Gln Glu Leu	Asp		221
Val Ser Asn Leu	Thr Leu Gln Ala Leu	Pro Gly Asp Leu Ser	Gly		225
Leu Phe Pro Arg	Leu Arg Leu Leu Ala	Ala Ala Arg Asn Pro	Phe		231
Asn Cys Val Cys	Pro Leu Ser Trp Phe	Gly Pro Trp Val Arg	Gln		237
Ser His Val Thr	Leu Ala Ser Pro Glu	Thr Thr Arg Cys His	Pro		243
Pro Pro Lys Asn	Ala Gly Arg Leu Leu	Leu Glu Leu Asp Tyr	Ala		249
Asp Phe Gly Cys	Pro Ala Thr Thr Thr	Thr Ala Thr Val Pro	Thr		255
Thr Arg Pro Val	Thr Arg Glu Pro Thr	Ala Leu Ser Ser Ser	Leu		261
Ala Pro Thr Trp	Leu Ser Pro Thr Ala	Pro Ala Thr Glu Ala	Pro		267
Ser Pro Pro Ser	Thr Ala Pro Pro Thr	Thr Gly Pro Val Pro	Gln		273
Pro Gln Asp Cys	Pro Pro Ser Thr Cys	Leu Asn Gly Gly Thr	Gln		279
His Leu Gly Thr	Arg His His Leu Ala	Cys Leu Cys Pro Glu	Gly		285
Phe Thr Gly Leu	Cys Cys Gln Ser Gln	His Gly Gln Gly Thr	Arg		291
Pro Ser Pro Thr	Pro Val Thr Pro Arg	Pro Pro Arg Ser Leu	Thr		297

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 Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg  
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 Arg Gly Arg Ala Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val  
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 Pro Ser Gly Ser Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly  
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 Pro Gly Leu Gln Ser Pro Leu His Ala Lys Pro Tyr Ile  
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110: 17  
 111: 1672  
 112: DNA  
 113: Homo Sapien

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 <213> Homo Sapien

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 65 70 75  
 Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp  
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 Ile Ser Phe Leu Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu  
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 Glu Pro Lys Lys Val Arg Lys Pro Ala Leu Thr Ala Ile Glu Gly  
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 Thr Ala His Gly Glu Pro Cys His Phe Phe Phe Leu Phe Leu Asp  
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 Lys Glu Tyr Asp Glu Cys Thr Ser Asp Gly Arg Glu Asp Gly Arg  
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 Leu Trp Cys Ala Thr Thr Tyr Asp Tyr Lys Ala Asp Glu Lys Trp  
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 Gly Phe Cys Glu Thr Glu Glu Glu Ala Ala Lys Arg Arg Gln Met  
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 Gly Ser Asn Lys Lys Ser Gln Lys Arg Glu Ala Tyr Arg Tyr Leu  
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 Gln Lys Ala Ala Ser Met Asn His Thr Lys Ala Leu Glu Arg Val  
 215 220 225  
 Ser Tyr Ala Leu Leu Phe Gly Asp Tyr Leu Pro Gln Asn Ile Gln  
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 Ala Ala Arg Glu Met Phe Glu Lys Leu Thr Glu Glu Gly Ser Pro  
 245 250 255  
 Lys Gly Gln Thr Ala Leu Gly Phe Leu Tyr Ala Ser Gly Leu Gly  
 260 265 270  
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 <211> 1508  
 <212> DNA

<213> Homo Sapien

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aaaaaaaa 1508

02100 20  
02110 319  
02120 PFT  
02130 Homo Sapien

04000 20  
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20 25 30  
Tyr Ile Phe Ile Thr Gly Cys Asp Ser Gly Phe Gly Asn Leu Ala  
35 40 45  
Ala Arg Thr Phe Asp Lys Lys Gly Phe His Val Ile Ala Ala Cys  
50 55 60  
Leu Thr Glu Ser Gly Ser Thr Ala Leu Lys Ala Glu Thr Ser Glu  
65 70  
Arg Leu Arg Thr Val Leu Leu Asp Val Thr Asp Pro Glu Asn Val  
75 80 85 90  
Lys Arg Thr Ala Gln Trp Val Lys Asn Gln Val Gly Glu Lys Gly  
95 100 105  
Leu Trp Gly Leu Ile Asn Asn Ala Gly Val Pro Gly Val Leu Ala  
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Pro Thr Asp Trp Leu Thr Leu Glu Asp Tyr Arg Glu Pro Ile Glu  
125 130 135  
Val Asn Leu Phe Gly Leu Ile Ser Val Thr Leu Asn Met Leu Pro  
140 145 150  
Leu Val Lys Lys Ala Gln Gly Arg Val Ile Asn Val Ser Ser Val  
155 160 165  
Gly Gly Arg Leu Ala Ile Val Gly Gly Gly Tyr Thr Pro Ser Lys  
170 175 180  
Tyr Ala Val Glu Gly Phe Asn Asp Ser Leu Arg Arg Asp Met Lys  
185 190 195  
Ala Phe Gly Val His Val Ser Cys Ile Glu Pro Gly Leu Phe Lys  
200 205 210  
Thr Asn Ieu Ala Asp Pro Val Lys Val Ile Glu Lys Lys Leu Ala  
215 220 225  
Ile Trp Glu Gln Leu Ser Pro Asp Ile Lys Gln Gln Tyr Gly Glu  
230 235 240  
Gly Tyr Ile Glu Lys Ser Leu Asp Lys Leu Lys Gly Asn Lys Ser  
245 250 255  
Tyr Val Asn Met Asp Leu Ser Pro Val Val Glu Lys Met Asp His  
260 265 270  
Ala Leu Thr Ser Leu Phe Pro Lys Thr His Tyr Ala Ala Gly Lys

Asp Ala Lys Ile Phe Trp Ile Pro Leu Ser His Met Pro Ala Ala  
290 295 300

Leu Gln Asp Phe Leu Leu Leu Lys Gln Lys Ala Glu Leu Ala Asn  
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Pro Lys Ala Val

(2108) 21

(2111) 1849

(2112) DNA

(2113) Homo Sapien

(400) 21

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 <211> 469  
 <212> F&T  
 <213> Homo Sapien

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 Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp  
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 Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn  
 65 70 75  
 Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser  
 80 85 90  
 Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His  
 95 100 105  
 Ser Asp Gln Ile Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn  
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 Asn Gln Gln His Phe Ser Leu Gln Asp Leu Val Thr Leu Leu Leu  
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 Thr Pro Ser Ile Ile Thr Glu Ser Cys Ser Thr His Arg Leu Glu  
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His Ser Leu Tyr	Lys Pro Gln Lys Gly	Leu Phe His Arg Val	Pro
	194	195	165
Leu Val Val Ala	Asn Leu Gly Met Ser	Glu Gln Leu Gly Tyr	Lys
	170	175	170
Thr Val Ser Gly	Ser Cys Met Ser Thr	Gly Phe Ser Arg Ala	Val
	185	190	145
Gln Thr His Ser	Ser Lys Phe Phe Glu	Glu Asp Gly Ser Leu	Lys
	190	205	210
Glu Val His Lys	Phe Asn Glu Met Tyr	Ala Ser Leu Gln Glu	Glu
	215	220	225
Leu Lys Ser Ile	Cys Lys Lys Val Glu	Asp Ser Glu Gln Ala	Val
	230	235	240
Asp Lys Leu Val	Lys Asp Val Asn Arg	Leu Lys Arg Glu Ile	Glu
	245	250	255
Lys Arg Arg Gly	Ala Gln Ile Gln Ala	Ala Arg Glu Lys Asn	Phe
	260	265	270
Gln Lys Asp Pro	Gln Glu Asn Ile Phe	Leu Cys Gln Ala Leu	Arg
	275	280	285
Thr Phe Phe Pro	Asn Ser Glu Phe Leu	His Ser Cys Val Met	Ser
	290	295	300
Leu Lys Asn Arg	His Val Ser Lys Ser	Ser Cys Asn Tyr Asn	His
	305	310	315
His Leu Asp Val	Val Asp Asn Leu Thr	Leu Met Val Glu His	Thr
	320	325	330
Asp Ile Pro Glu	Ala Ser Pro Ala Ser	Thr Pro Gln Ile Ile	Lys
	335	340	345
His Lys Ala Leu	Asp Leu Asp Asp Arg	Trp Gln Phe Lys Arg	Ser
	350	355	360
Arg Leu Leu Asp	Thr Gln Asp Lys Arg	Ser Lys Ala Asn Thr	Gly
	365	370	375
Ser Ser Asn Gln	Asp Lys Ala Ser Lys	Met Ser Ser Pro Glu	Thr
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Asp Glu Glu Ile	Leu Lys Met Lys Gly	Phe Gly Glu Tyr Ser	Arg
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Ser Pro Thr Phe

<210> 23

<211> 2651

<212> DNA

<213> Homo Sapien

<400> 23

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Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe	
				95					100					105	
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu	
				110					115					120	
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn	
				125					130					135	
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Gln	Leu	Lys	Arg	Tyr	Tyr	
				140					145					150	
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Tyr	
				155					160					165	
Ala	Arg	Leu	Leu	Gln	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr	
				170					175					180	
His	Phe	Thr	Asp	Gln	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Gln	
				185					190					195	
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln	
				200					205					210	
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu	
				215					220					225	
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Leu	
				230					235					240	
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser	
				245					250					255	
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys	
				260					265					270	
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp	
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Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Gln	
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Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile	
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Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser	
				320					325					330	
Val	Gln	Val	Ser	Asn	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys	
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Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala	
				350					355					360	
Phe	Ser	Ala	Arg	Leu	Leu	Pro	His	His	Ala	Ala	Gln	Arg	Pro	Ser	
				365					370					375	
Thr	Ala	Ala	Gly	Thr	Ser	Leu	Asp	Arg	Leu	Val	Thr	Asp	Val	Lys	
				380					385					390	

Glu	Lys	Leu	Lys	Gln	Ala	Lys	Lys	Phe	Trp	Ser	Ser	Leu	Pro	Ser	
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Asn	Val	Cys	Asn	Asp	Glu	Arg	Met	Ala	Ala	Gly	Asn	Gly	Asn	Glu	
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Asp	Asp	Cys	Trp	Asn	Gly	Lys	Gly	Lys	Ser	Arg	Tyr	Leu	Phe	Ala	
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Val	Thr	Gly	Asn	Gly	Leu	Ala	Asn	Gln	Gly	Asn	Asn	Pro	Glu	Val	
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Gln	Val	Asp	Thr	Ser	Lys	Pro	Asp	Ile	Leu	Ile	Leu	Arg	Gln	Ile	
				455					460					465	
Met	Ala	Leu	Arg	Val	Met	Thr	Ser	Lys	Met	Lys	Asn	Ala	Tyr	Asn	
				470					475					480	
Gly	Asn	Asp	Val	Asp	Phe	Phe	Asp	Ile	Ser	Asp	Glu	Ser	Ser	Gly	
				485					490					495	
Glu	Gly	Ser	Gly	Ser	Gly	Cys	Glu	Tyr	Gln	Gln	Cys	Pro	Ser	Glu	
				500					505					510	
Phe	Asp	Tyr	Asn	Ala	Thr	Asp	His	Ala	Gly	Lys	Ser	Ala	Asn	Glu	
				515					520					525	
Lys	Ala	Asp	Ser	Ala	Gly	Val	Arg	Pro	Gly	Ala	Gln	Ala	Tyr	Leu	
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 (111): 870  
 (112): DNA  
 (113): Homo Sapien.

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 35 40 45  
 Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro  
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 65 70 75  
 Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln  
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<213> Hmo Saplen

<400> 18

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Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser
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 Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val  
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 Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg  
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 170 175 180  
 Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp  
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 Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys  
 200 205 210  
 Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln  
 215 220 225  
 Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly  
 230 235 240  
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 gattggcct tctttccccc ttctttctg tgttcctgc ctcatcgccc 44  
 tggcatgacc tgcagccaag cccagccccg tggggaaagg tggaaaaggg 55  
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 Phe Leu Cys Leu Leu Pro His Arg Pro Ala Met Thr Cys Ser Gln  
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1100 32  
 1110 445  
 1120 FFT  
 1130 Homo Sapien

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 His Gln Gly Thr Val Val Lys Gly Ser His Leu Ile Ser Val Val  
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 Gly Lys Val Leu Val Val Cys Phe Thr Val Phe Gly Gly Leu Met  
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Met	Asp	Gln	Glu	Phe	Leu	Ser	Phe	Val	Lys	Arg	Ser	Asn	Lys	Leu
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Asn	Asn	Ala	Arg	Ala	Gln	Gln	Asp	Lys	His	Ser	Leu	Arg	Asn	Glu
				425					430					435
Glu	Gly	Thr	Glu	Leu	Gln	Ala	Ile	Val	Arg					
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00100: 2A

00110: 2273

00120: 181A

00130: Homo Sapien

0400: 1A

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Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	
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Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	
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Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	
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Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	
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Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	

275	280	285
Gly Asp Pro Asn Cys Lys Ile Asp Leu Ser Phe Leu Ile Asp Gly		
290	295	300
Ser Thr Ser Ile Gly Lys Arg Arg Phe Arg Ile Gln Lys Gln Leu		
305	310	315
Leu Ala Asp Val Ala Gln Ala Leu Asp Ile Gly Pro Ala Gly Pro		
320	325	330
Leu Met Gly Val Val Gln Tyr Gly Asp Asn Pro Ala Thr His Ile		
335	340	345
Asn Leu Lys Thr His Thr Asn Ser Arg Asp Leu Lys Thr Ala Ile		
350	355	360
Glu Lys Ile Thr Gln Arg Gly Gly Leu Ser Asn Val Gly Arg Ala		
365	370	375
Ile Ser Phe Val Thr Lys Asn Phe Phe Ser Lys Ala Asn Gly Asn		
380	385	390
Arg Ser Gly Ala Pro Asn Val Val Val Val Met Val Asp Gly Trp		
395	400	405
Pro Thr Asp Lys Val Glu Glu Ala Ser Arg Leu Ala Arg Glu Ser		
410	415	420
Gly Ile Asn Ile Phe Phe Ile Thr Ile Glu Gly Ala Ala Glu Asn		
425	430	435
Glu Lys Gln Tyr Val Val Glu Pro Asn Phe Ala Asn Lys Ala Val		
440	445	450
Cys Arg Thr Asn Gly Phe Tyr Ser Leu His Val Gln Ser Trp Ile		
455	460	465
Gly Leu His Lys Thr Leu Gln Pro Leu Val Lys Arg Val Cys Asp		
470	475	480
Thr Asp Arg Leu Ala Cys Ser Lys Thr Cys Leu Asn Ser Ala Asp		
485	490	495
Ile Gly Phe Val Ile Asp Gly Ser Ser Ser Val Gly Thr Gly Asn		
500	505	510
Phe Arg Thr Val Leu Gln Phe Val Thr Asn Leu Thr Lys Glu Ile		
515	520	525
Glu Ile Ser Asp Thr Asp Thr Arg Ile Gly Ala Val Gln Tyr Thr		
530	535	540
Tyr Glu Gln Arg Leu Glu Phe Gly Phe Asp Lys Tyr Ser Ser Lys		
545	550	555
Pro Asp Ile Leu Asn Ala Ile Lys Arg Val Gly Tyr Trp Ser Gly		
560	565	570
Gly Thr Ser Thr Gly Ala Ala Ile Asn Phe Ala Leu Thr Thr Thr		
575	580	585
Phe Lys Lys Ser Lys Pro Asn Lys Arg Lys Leu Met Ile Leu Ile		



590

595

600

Thr Asp Gly Arg Ser Tyr Asp Asp Val Arg Ile Pro Ala Met Ala  
605 610 615

Ala His Leu Lys Gly Val Ile Thr Tyr Ala Ile Gly Val Ala His  
620 625 630

Ala Ala Gln Glu Glu Leu Glu Val Ile Ala Thr His Pro Ala Arg  
635 640 645

Asp His Ser Phe Phe Val Asp Glu Phe Asp Asn Leu His Gln Tyr  
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Val Pro Arg Ile Ile Gln Asn Ile Cys Thr Glu Phe Asn Ser His  
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Pro Arg Asn

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&lt;211&gt; 2195

&lt;212&gt; DNA

&lt;213&gt; Homo Sapien

&lt;400&gt; 35

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caaaaaaaa ctttaagcttt aatttcattt ggaattccac agttttctta 20'

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<212> EET

<213> Homo Sapien

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			20						25					30

Phe	Val	Met	Trp	Tyr	Leu	Asn	Leu	Val	Asn	Tyr	Asn	Val	Ile	Glu
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Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	54		55		56
Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His	84		89		94
Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp	94		99		104
Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys	104		109		114
Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln	114		119		124
Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp	124		129		134
Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp	134		139		144
Thr Tyr Asn Asn Leu Thr Leu Lys Thr Phe Met Ala Phe Arg Thr	144		149		154
Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp	154		159		164
Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu	164		169		174
Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile	174		179		184
Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser	184		189		194
Tyr Gln Glu Tyr Pro Phe Lys Val Phe Ile Pro Tyr Cys Ser Gly	194		199		204
Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Gln	204		209		214
Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val	214		219		224
Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu	224		229		234
Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys	234		239		244
Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Leu	244		249		254
Ile Ile Thr Phe Arg Gln Val Met Leu Arg Asn Thr Thr Cys His	254		259		264

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Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu	50	55	60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu	65	70	75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn	80	85	90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp	95	100	105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp	110	115	120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro	125	130	135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys	140	145	150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg	155	160	165
Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe His Ala Ile Tyr Glu Gln Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala			

335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu		
350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr		
365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys		
380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His		
395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Asn		
410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp		
425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Gln		
440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln		
455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Ile		
470	475	480
His Lys Gly Ala Trp Phe Leu Val Cys Ser Gly Ala Leu Val Asn		
485	490	495
Glu Arg Thr Val Val Val Ala Ala His Cys Val Thr Asp Leu Gly		
500	505	510
Lys Val Thr Met Ile Lys Thr Ala Asp Leu Lys Val Val Leu Gly		
515	520	525
Lys Phe Tyr Arg Asp Asp Asp Arg Asp Glu Lys Thr Ile Gln Ser		
530	535	540
Leu Gln Ile Ser Ala Ile Ile Leu His Pro Asn Tyr Asp Pro Ile		
545	550	555
Leu Leu Asp Ala Asp Ile Ala Ile Leu Lys Leu Leu Asp Lys Ala		
560	565	570
Arg Ile Ser Thr Arg Val Gln Pro Ile Lys Leu Ala Ala Ser Arg		
575	580	585
Asp Leu Ser Thr Ser Phe Gln Glu Ser His Ile Thr Val Ala Gly		
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Trp Asn Val Leu Ala Asp Val Arg Ser Pro Gly Phe Lys Asn Asp		
605	610	615
Thr Leu Arg Ser Gly Val Val Ser Val Val Asp Ser Leu Leu Cys		
620	625	630
Gln Gln Gln His Glu Asp His Gly Ile Pro Val Ser Val Thr Asp		
635	640	645
Asn Met Phe Cys Ala Ser Trp Glu Pro Thr Ala Pro Ser Asp Ile		

	650	655	660
Cys Thr Ala Glu Thr Gly Gly Ile Ala Ala Val Ser Phe Pro Gly			
	665	670	675
Arg Ala Ser Pro Glu Pro Arg Trp His Leu Met Gly Leu Val Ser			
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Trp Ser Tyr Asp Lys Thr Cys Ser His Arg Leu Ser Thr Ala Phe			
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Thr Lys Val Leu Pro Phe Lys Asp Trp Ile Glu Arg Asn Met Lys			
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<12> PPT

<13> Homo Sapien

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Ala	Thr	Ala	Pro	Ser	Pro	Glu	Val	Ser	Ala	Ala	Ala	Thr	Ile	Ser	
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Ser	Ala	Glu	Asp	Gly	Gln	Pro	Ala	Ile	Ser	Pro	Val	Asp	Ser	Gly	
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Arg	Ser	Asn	Arg	Thr	Arg	Ala	Arg	Pro	Phe	Glu	Arg	Ser	Thr	Ile	
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				125					130					135	
Arg	Arg	Thr	Lys	Ser	Gly	Ser	Ala	Val	Ala	Asn	His	Ala	Asp	Gln	
				140					145					150	
Gly	Arg	Glu	Asn	Ser	Gln	Asn	Thr	Thr	Ala	Pro	Glu	Val	Phe	Pro	
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Arg	Leu	Tyr	His	Ile	Ile	Pro	Asp	Gly	Gln	Ile	Thr	Ser	Ile	Lys	
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Ile	Asn	Arg	Val	Asp	Pro	Ser	Glu	Ser	Leu	Ser	Ile	Arg	Leu	Val	
				185					190					195	
Gly	Gly	Ser	Glu	Thr	Pro	Leu	Val	His	Ile	Ile	Ile	Gln	His	Ile	
				200					205					210	
Tyr	Arg	Asp	Gly	Val	Ile	Ala	Arg	Asp	Gly	Arg	Leu	Leu	Pro	Gly	
				215					220					225	
Asp	Ile	Ile	Leu	Lys	Val	Asn	Gly	Met	Asp	Ile	Ser	Asn	Val	Pro	
				230					235					240	
His	Asn	Tyr	Ala	Val	Arg	Leu	Leu	Arg	Gln	Pro	Cys	Gln	Val	Leu	
				245					250					255	
Trp	Leu	Thr	Val	Met	Arg	Glu	Gln	Lys	Phe	Arg	Ser	Arg	Asn	Asn	
				260					265					270	
Gly	Gln	Ala	Pro	Leu	Ala	Tyr	Arg	Pro	Arg	Asp	Asp	Ser	Phe	His	
				275					280					285	
Val	Ile	Leu	Asn	Lys	Ser	Ser	Pro	Glu	Glu	Gln	Leu	Gly	Ile	Lys	
				290					295					300	

Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn Val	305	315	315
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu Asn	310	325	330
Asp Arg Val Leu	Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser	335	345	345
Pro Glu Ser Ala	Ala His Leu Ile Gln Ala	Ser Glu Arg Arg Val	350	355	360
His Leu Val Val	Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile	365	375	375
Phe Gln Glu Ala	Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly	380	385	390
Pro Gly Glu Arg	Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile	395	405	410
Thr Cys His Glu	Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu	415	415	420
Ser Leu Gly Met	Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp	425	435	445
Asp Leu Pro Ile	Tyr Val Ile Ser Val	Gln Pro Gly Gly Val Ile	450	455	460
Ser Arg Asp Gly	Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val	465	475	485
Asp Gly Val Glu	Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala	490	495	500
Leu Leu Lys Arg	Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu	505	515	515
Val Lys Glu Tyr	Gln Pro Gln Gln Asp	Cys Ser Ser Pro Ala Ala	520	535	540
Leu Asp Ser Asn	His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro	545	555	565
Ser Trp Val Met	Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys	570	575	580
Lys Asp Ile Val	Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Pro	585	595	605
Cys Ile Val Gly	Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Ile	610	615	620
Phe Ile Lys Ser	Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly	625	635	645
Arg Ile Arg Cys	Gly Asp Ile Leu Leu	Gln Val Asn Gly Arg Ser	650	655	660
Thr Ser Gly Met	Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu	665	675	685

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Phe Leu

(110) 41  
(111) 1964  
(112) DNA  
(113) Homo Sapien

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caatttcaga ttactgttgc tgttgacttt gtgcctgaca gtgggtgggt 200  
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tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900  
acatatlaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950  
ctgaaaaagg aaaa 1964

CL10: 4L  
CL11: 344  
CL12: FET  
CL13: Homo Sapien

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Ser Asn Tyr Phe Val Gly Ala Ile Gln Glu Ile Pro Lys Ala Lys  
35 40 45  
Glu Phe Met Ala Asn Phe His Lys Thr Leu Ile Leu Gly Lys Gly  
50 55 60  
Lys Thr Leu Thr Asn Glu Ala Ser Thr Lys Lys Val Glu Leu Asp  
65 70 75  
Asn Cys Pro Ser Val Ser Pro Tyr Leu Arg Gly Gln Ser Lys Leu  
80 85 90  
Ile Phe Lys Pro Asp Leu Thr Leu Glu Glu Val Gln Ala Glu Asn  
95 100 105  
Pro Lys Val Ser Arg Gly Arg Tyr Arg Pro Gln Glu Cys Lys Ala  
110 115 120  
Leu Gln Arg Val Ala Ile Leu Val Pro His Arg Asn Arg Glu Lys  
125 130 135

His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg
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Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly
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Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Gln
			170						175					180
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val
			185						190					195
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Gln
			200						205					210
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg
			215						220					225
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg
			230						235					240
Gln	Gln	Phe	Phe	Leu	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly
			245						250					255
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln
			260						265					270
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Gln	Val	Gly	Lys	Tyr	Thr
			275						280					285
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Leu
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Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp
			305						310					315
Gly	Leu	Ser	Ser	Lys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Gln	His	Asn
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<110> 4-5

<120> DNA

<130> Homo Sapien

<140> 43

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00100: 44

00110: 84

00120: PPT

00130: Homo Sapien

0400: 44

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Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln  
20 25 30

Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala  
35 40 45

Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp  
50 55 60

Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg  
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Ser Lys Cys Gly Met Cys Cys Lys Thr  
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02100: 45

02110: 1676

02120: tNA

02130: Homo Sapien

0400: 45

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02100 46  
 02110 335  
 02120 PBT  
 02130 Homo Sapien

02100 46  
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 1 10  
 Gln Leu Thr Gly Ser Ala Ala Ser Gly Pro Val Lys Glu Leu Val  
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 Gly Ser Val Gly Gly Ala Val Thr Phe Pro Leu Lys Ser Lys Val  
 40 45  
 Lys Gln Val Asp Ser Ile Val Trp Thr Phe Asn Thr Thr Pro Leu  
 60 60  
 Val Thr Ile Gln Pro Glu Gly Gly Thr Ile Ile Val Thr Gln Asn  
 75 75  
 Arg Asn Arg Glu Arg Val Asp Phe Pro Asp Gly Gly Tyr Ser Leu  
 90 90  
 Lys Leu Ser Lys Leu Lys Lys Asn Asp Ser Gly Ile Tyr Tyr Val  
 105 105  
 Gly Ile Tyr Ser Ser Ser Leu Gln Gln Pro Ser Thr Gln Glu Tyr  
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 Val Leu His Val Tyr Glu His Leu Ser Lys Pro Lys Val Thr Met  
 135 145  
 Gly Leu Gln Ser Arg Lys Asn Gly Thr Cys Val Thr Asn Leu Thr  
 160 160  
 Cys Cys Met Glu His Gly Glu Glu Asp Val Ile Tyr Thr Trp Lys  
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 Ala Leu Gly Gln Ala Ala Asn Glu Ser His Asn Gly Ser Ile Leu  
 200 210  
 Pro Ile Ser Tyr Arg Trp Gly Glu Ser Asp Met Thr Thr Thr Cys  
 225 225  
 Val Ala Arg Asn Pro Val Ser Arg Asn Phe Ser Ser Pro Ile Leu  
 240 250



Ala Arg Lys Leu Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser
215	220 225
Met Val Leu Leu Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu
230	235 240
Phe Val Leu Gly Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg Glu
245	250 255
Glu Glu Tyr Ile Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu
260	265 270
Thr Pro Asn Ile Lys Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp
275	280 285
Thr Ile Pro His Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala
290	295 300
Asn Thr Val Tyr Ser Thr Val Glu Ile	Pro Lys Lys Met Glu Asn
305	310 315
Pro His Ser Leu Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala
320	325 330
Tyr Glu Asn Val Ile	
335	

110 : 47  
 111 : 766  
 112 : DNA  
 113 : Homo Sapien

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 agcaggcttg atggccattc cagcaacaac aatgtccttg acagcaagaa 250  
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 caattgtga atttccattg aaaaacatca gtjacattca tccagaatcc 450  
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<211> 339  
<212> PRT  
<213> Homo Sapien

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Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile  
35 40 45  
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu  
50 55 60  
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg  
65 70 75  
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe  
80 85 90  
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser  
95 100 105  
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser  
110 115 120  
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asn  
125 130 135  
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser  
140 145 150  
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr  
155 160 165  
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu  
170 175 180  
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu  
185 190 195  
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile  
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Ser Gln Ile Val

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<112> DNA  
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<400> 49

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Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys  
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Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu  
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Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys  
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ajacactctg gagagagagg gggctgggca gaaatgaagt tccaggggac 200

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<400> 57

Met	Lys	Phe	Gln	Gly	Pro	Leu	Ala	Cys	Leu	Leu	Leu	Ala	Leu	Cys	1	5	10	15
Leu	Gly	Ser	Gly	Glu	Ala	Gly	Pro	Leu	Gln	Ser	Gly	Glu	Glu	Ser	20	25	30	
Thr	Gly	Thr	Asn	Ile	Gly	Glu	Ala	Leu	Gly	His	Gly	Leu	Gly	Asp	35	40	45	
Ala	Leu	Ser	Gln	Gly	Val	Gly	Lys	Ala	Ile	Gly	Lys	Glu	Ala	Gly	50	55	60	
Gly	Ala	Ala	Gly	Ser	Lys	Val	Ser	Glu	Ala	Leu	Gly	Gln	Gly	Thr	65	70	75	
Arg	Gln	Ala	Val	Gly	Thr	Gly	Val	Arg	Gln	Val	Pro	Gly	Phe	Gly	80	85	90	
Ala	Ala	Asp	Ala	Leu	Gly	Asn	Arg	Val	Gly	Glu	Ala	Ala	His	Ala	95	100	105	
Leu	Gly	Asn	Thr	Gly	His	Glu	Ile	Gly	Arg	Gln	Ala	Glu	Asp	Val	110	115	119	
Ile	Arg	His	Gly	Ala	Asp	Ala	Val	Arg	Gly	Ser	Trp	Gln	Gly	Val	120	125	130	
Pro	Gly	His	Ser	Gly	Ala	Trp	Glu	Thr	Ser	Gly	Gly	His	Gly	Ile	135	140	145	
Phe	Gly	Ser	Gln	Gly	Gly	Leu	Gly	Gly	Gln	Gly	Gln	Gly	Asn	Pro	150	155	160	
Gly	Gly	Leu	Gly	Thr	Pro	Trp	Val	His	Gly	Tyr	Pro	Gly	Asn	Ser	165	170	175	
Ala	Gly	Ser	Phe	Gly	Met	Asn	Pro	Gln	Gly	Ala	Pro	Trp	Gly	Gln	180	185	190	
Gly	Gly	Asn	Gly	Gly	Pro	Pro	Asn	Phe	Gly	Thr	Asn	Thr	Gln	Gly	200	205	210	
Ala	Val	Ala	Gln	Pro	Gly	Tyr	Gly	Ser	Val	Arg	Ala	Ser	Asn	Gln	215	220	225	
Asn	Glu	Gly	Cys	Thr	Asn	Pro	Pro	Pro	Ser	Gly	Ser	Gly	Gly	Gly	230	235	240	
Ser	Ser	Asn	Ser	Gly	Gly	Gly	Ser	Gly	Ser	Gln	Ser	Gly	Ser	Ser	245	250	255	
Gly	Ser	Gly	Ser	Asn	Gly	Asp	Asn	Asn	Asn	Gly	Ser	Ser	Ser	Gly	260	265	270	
Gly	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Gly	Ser	275	280	285	

Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Asn Ser Gly Gly Ser	290	295	300
Arg Gly Asp Ser Gly Ser Glu Ser Ser Trp Gly Ser Ser Thr Gly	305	310	315
Ser Ser Ser Gly Asn His Gly Gly Ser Gly Gly Gly Asn Gly His	320	325	330
Lys Pro Gly Cys Glu Lys Pro Gly Asn Glu Ala Arg Gly Ser Gly	335	340	345
Glu Ser Gly Ile Gln Gly Phe Arg Gly Gln Gly Val Ser Ser Asn	350	355	360
Met Arg Glu Ile Ser Lys Glu Gly Asn Arg Leu Leu Gly Gly Ser	365	370	375
Gly Asp Asn Tyr Arg Gly Gln Gly Ser Ser Trp Gly Ser Gly Gly	380	385	390
Gly Asp Ala Val Gly Gly Val Asn Thr Val Asn Ser Gln Thr Ser	395	400	405
Pro Gly Met Phe Asn Phe Asp Thr Phe Trp Lys Asn Phe Lys Ser	410	415	420
Lys Leu Gly Phe Ile Asn Trp Asp Ala Ile Asn Lys Asp Gln Arg	425	430	435
Ser Ser Arg Ile Pro	440		

<110> 53  
 <111> 1676  
 <112> DNA  
 <113> Homo Sapien

<400> 53  
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 accctgctg ctggttggg gctcctgggt actgcccgc accctggctt 150  
 ggaactatga cttctataac aactgcgcgc ggcaccagt tttccacag 200  
 cccccaaaac ggaactggtt ttggggctac ctgggctga ttaactctac 250  
 agaggagggc ttgaaggact ccacccaat gtgggcacac tattcccagg 300  
 gctttacggt atggtgggt cccatcctcc ccttcctcgt ttatgccac 350  
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 gcttcacat cccatctct gaag cctat ataa gctct tctcaggt 550  
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 tgcagacagg aggtgcaaga gctctgaag gacgtctat ctaaaagagc 1150  
 tgatcgggac gacttggccc agctgcctt cctgacatt tgcgtgaagg 1200  
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 caggacattg ttctcccaga tggccagtc atcccacaa gcattacctg 1300  
 ccttcctgat atttataggg tccatcaca ccccaactgt tggccggatc 1350  
 ctgaggtcta ccaccccttc cgttttgacc cagagacag caaggggagg 1400  
 tcaactctgg cttctattcc tctctccga gggccaggga actgcacgg 1450  
 ccaagccttc gccatgggg agatgaaagt cgtctggcg ctgatctgc 1500  
 tgccttccg cttctgcca gaccacactg agccctgcag gaagctggaa 1550  
 ctgctcatgc ccgcagagg cgggcttttg ctgcgggtgg agccctgaa 1600  
 tgtaggettg cagtgaattt ctgaccatc cactgtttt tttgcagatt 1650  
 ctcatgaata aaacggtgct gtcaaa 1676

<10> 54  
 <11> 534  
 <12> FET  
 <13> Homo Sapien

<100> 54  
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 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu  
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 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys  
 35 40 45  
 Arg Arg Leu Glu Cys Phe Iru Ala Trp Iru Cys Arg Asn Trp Phe  
 50 55 60  
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys

65	70	75
Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val		
80	85	90
Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp		
95	100	105
Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys		
110	115	120
Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly		
125	130	135
Ile Leu Leu Ser Gly Gly Asp Lys Trp Ser Arg His Arg Arg Met		
140	145	149
Leu Thr Pro Ala Phe His Phe Asn Ile Leu Lys Ser Tyr Ile Thr		
155	160	165
Ile Phe Asn Lys Ser Ala Asn Ile Met Leu Asp Lys Trp Gln His		
170	175	180
Leu Ala Ser Glu Gly Ser Ser Arg Leu Asp Met Phe Glu His Ile		
185	190	195
Ser Leu Met Thr Leu Asp Ser Leu Gln Lys Cys Ile Phe Ser Phe		
200	205	210
Asp Ser His Cys Asn Glu Arg Pro Ser Glu Tyr Ile Ala Thr Ile		
215	220	225
Leu Glu Leu Ser Ala Leu Val Glu Lys Arg Ser Gln His Ile Leu		
230	235	240
Gln His Met Asp Phe Leu Tyr Tyr Leu Ser His Asp Gly Arg Arg		
245	250	255
Phe His Arg Ala Lys Arg Leu Val His Asp Phe Thr Asp Ala Val		
260	265	270
Ile Arg Glu Arg Arg Arg Thr Leu Pro Thr Gln Gly Ile Asp Asp		
275	280	285
Phe Phe Lys Asp Lys Ala Lys Ser Lys Thr Leu Asp Phe Ile Asp		
290	295	300
Val Leu Leu Leu Ser Lys Asp Glu Asp Gly Lys Ala Leu Ser Asp		
305	310	315
Glu Asp Ile Arg Ala Glu Ala Asp Thr Phe Met Phe Gly Gly His		
320	325	330
Asp Thr Thr Ala Ser Gly Leu Ser Trp Val Leu Tyr Asn Leu Ala		
335	340	345
Arg His Pro Glu Tyr Gln Glu Arg Cys Arg Gln Glu Val Gln Ile		
350	355	360
Leu Leu Lys Asp Arg Asp Phe Lys Ser Ile Leu Thr Trp Asp Asp		
365	370	375
Ala Gln Leu Pro Phe Leu Thr Met Cys Val Lys Glu Ser Leu Arg		



380	385	390
Leu His Pro Pro Ala Pro Phe Ile Ser Arg Cys Cys Thr Gln Asp 395	400	405
Ile Val Leu Pro Asp Gly Arg Val Ile Pro Lys Gly Ile Thr Cys 410	415	420
Leu Ile Asp Ile Ile Gly Val His His Asn Pro Thr Val Trp Pro 425	430	435
Asp Pro Glu Val Tyr Asp Pro Phe Arg Phe Asp Pro Glu Asn Ser 440	445	450
Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro 455	460	465
Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val 470	475	480
Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His 485	490	495
Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly 500	505	510
Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln 515	520	

(210) 55  
 (211) 644  
 (212) DNA  
 (213) Homo Sapien

(400) 55  
 atcccatcaa ttgggagtac catcttctctc atgggtaccag tgaaacagct 50  
 gaagcgaatg tttagacta ctggtttgat tgcactatc atgggtgctgt 100  
 tgggttttgc acttaccctg tgtttctgctt ttgggtggca taacaaggga 150  
 attgcactta tcttctgcac ttgcagctct ttgggattga cgttggtacag 200  
 cctttccttc ataccatttg caagggatgc tgtgaagaag tgttttgcgc 250  
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 tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350  
 tacagacatg tgccttttat cttgcagcaa tgtgttgcct gtgattcgaa 400  
 catctgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450  
 cagtagcaca ggatgagaag tgggtttctgt atcttctgga gtggaatctt 500  
 cctcatgtac ctgtttctct tctggatgtt gtccactga attcccatga 550  
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 aaaaaaaaga gcaaaaaa aaaaaaaa aaaaaaaa aaaa 644

<210> 56  
 <211> 77

<212> PET

<213> Homo Sapien

<400> 50

Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg  
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Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu  
20 25 30

Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe  
35 40 45

Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe  
50 55 60

Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys  
65 70 75

Leu Ala

<210> 5'

<211> 3434

<212> HNA

<213> Homo Sapien

<400> 5'

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cccgaccca gttccagtao tttgagtga agggctccc tgcagagctg 150  
aagtcattt tcaagctcag tgccttcac cctcccaag aattctcac 200  
cttcggcag tgaagcaga aaattgtaca agctggagat aaggaccttg 250  
atggcagct agactttgaa gaatttgtcc attatctca agatcatgag 300  
aagaagctga ggtcgtgtt taagattttg gacaaaaa atgatggacg 350  
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 ctccggaggt gacctgagc agcctcttca aacatctct gcggacagag 1350  
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Q110 SF  
 Q211 4x9  
 Q113 EFT  
 Q115 Homo Sapien

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 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe  
 35 40 45  
 Ser Tyr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp  
 50 55 60  
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Gln Glu Phe Val His Tyr  
 65 70 75  
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu  
 80 85 90  
 Asp Lys Lys Asn Asp Gly Arg Ile Asp Ala Gln Glu Ile Met Gln  
 95 100 105

Ser Leu Arg Asp Leu Gly Val Lys Ile Ser Glu Gln Gln Ala Glu  
 110 115 120  
 Lys Ile Leu Lys Ser Met Asp Lys Asn Gly Thr Met Thr Ile Asp  
 125 130 135  
 Trp Asn Glu Trp Arg Asp Tyr His Leu Leu His Pro Val Glu Asn  
 140 145 150  
 Ile Pro Glu Ile Ile Leu Tyr Trp Lys His Ser Thr Ile Phe Asp  
 155 160 165  
 Val Gly Glu Asn Leu Thr Val Pro Asp Glu Phe Thr Val Glu Glu  
 170 175 180  
 Arg Gln Thr Gly Met Trp Trp Arg His Leu Val Ala Gly Gly Gly  
 185 190 195  
 Ala Gly Ala Val Ser Arg Thr Cys Thr Ala Pro Leu Asp Arg Ile  
 200 205 210  
 Lys Val Leu Met Gln Val His Ala Ser Arg Ser Asn Asn Met Gly  
 215 220 225  
 Ile Val Gly Gly Ile Thr Gln Met Ile Arg Glu Gly Gly Ala Arg  
 230 235 240  
 Ser Leu Trp Arg Gly Asn Gly Ile Asn Val Leu Lys Ile Ala Pro  
 245 250 255  
 Glu Ser Ala Ile Lys Phe Met Ala Tyr Glu Gln Ile Lys Arg Ile  
 260 265 270  
 Val Gly Ser Asp Gln Glu Thr Ile Arg Ile His Glu Arg Leu Val  
 275 280 285  
 Ala Gly Ser Leu Ala Gly Ala Ile Ala Gln Ser Ser Ile Tyr Pro  
 290 295 300  
 Met Glu Val Leu Lys Thr Arg Met Ala Ile Arg Lys Thr Gly Gln  
 305 310 315  
 Tyr Ser Gly Met Leu Asp Cys Ala Arg Arg Ile Leu Ala Arg Gln  
 320 325 330  
 Gly Val Ala Ala Ile Tyr Lys Gly Tyr Val Pro Asn Met Leu Gly  
 335 340 345  
 Ile Ile Pro Tyr Ala Gly Ile Asp Leu Ala Val Tyr Glu Thr Leu  
 350 355 360  
 Lys Asn Ala Trp Leu Gln His Tyr Ala Val Asn Ser Ala Asp Pro  
 365 370 375  
 Gly Val Phe Val Leu Leu Ala Cys Gly Thr Met Ser Ser Thr Cys  
 380 385 390  
 Gly Gln Leu Ala Ser Tyr Pro Leu Ala Leu Val Arg Thr Arg Met  
 395 400 405  
 Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser  
 410 415 420

Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu  
 425 430 435  
 Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val  
 440 445 450  
 Ser Ile Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Tyr  
 455 460 465  
 Val Gln Ser Arg

110: 5'  
 111: 1058  
 112: DNA  
 113: Homo Sapien

1100: 5'  
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 gcatacatat tattctgggt ggagcaattg cactcatcat tggctttggt 15  
 atttcaggga gacactccat cacagtcact actctcgccct cagctgggaa 20  
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 25  
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actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200  
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 aattgactgc caactcgaaa ctccaggggg gctgcatttt agtaatgggt 1450  
 caaatgatto actttttatg atgcttccaa aggtgccttg gcttctcttc 1500  
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 acagagcagt cggggacacc gattttataa ataaactgag caactctttt 1600  
 ttacacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
 aaaaaaaaa 1698

4100-60  
 4110-182  
 4112-PLT  
 4113-Homo Sapien

4400-60  
 Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile  
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 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala  
 35 40 45  
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro  
 50 55 60  
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly  
 65 70 75  
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu  
 80 85 90  
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala  
 95 100 105  
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val  
 110 115 120  
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser  
 125 130 135  
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe  
 140 145 150  
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Val Thr  
 155 160 165  
 Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val

170	175	180
Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser		
185	190	195
Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val		
200	205	210
Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys		
215	220	225
Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val		
230	235	240
Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn		
245	250	255
Ser Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp		
260	265	270
Ala Leu Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys		
275	280	

110: 61  
 111: 1617  
 112: DNA  
 113: Homo Sapien

1400: 61  
 tgaagtcaga atcaacatgg ccagctatcc ttaacggcag ggctgcccag 50  
 gaggtgcagg acaagctcca ggagccctc cgggtagcta ctaccctgga 100  
 ccccccata gtggagggca gtatggtagt gggtacccc ctggtggttg 150  
 ttatgggggt cctgcctctg gagggcotta tggaccacca gctggtggag 200  
 ggccctatgg acacccaat cctgggatgt tccctctctg aactccagga 250  
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 aagttcctac ggtgaccagg agcctgggct ttatggacag ggtggcgccc 350  
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 tggttcaca gaccagtcg ggcgcctcg atgtctacgg cttctcagcc 550  
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 ggcctgctcg ggctccatta gctacacaga gctgcagcaa gctctgtccc 650  
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 taatgcccac cctctcccaa tctgcccag cagcttgacc gcttcctcca 750  
 ggtgtgcaac cactccagg tctgacaga ggccttcagg gagggggata 800  
 cagctgcaaa aggaacatc cggctcagct tggaggactt cgtcaccatg 850



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 gttgaatgtc ctgatygcca tgagagctg agtgccacag cctggcacca 1150  
 ggagcaggtc ctgtaatgg agttagtgtc cagtcagctg agctccacc 1200  
 tgaigccagt ggtgaatgtt catcggcctg ttaacgttag taactgtgtt 1250  
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 cccacacca taaatcttg tctgttaact tctagctgcc tggggctggc 1400  
 cctctctaga caaatctgtt cctgggcctt cttggccag gcttctgcc 1450  
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 ctcagagaga cagtgtcac ctctccctgc caatactttt ttaatttgc 1550  
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 caaga'gaa actctja 1617

<100: 61

<110: 2-4

<120: FFT

<130: Homo Sapien

<100: 61

Met	Ala	Ser	Tyr	Pro	Tyr	Arg	Gln	Gly	Cys	Pro	Gly	Ala	Ala	Gly	1
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Gln	Ala	Pro	Gly	Ala	Pro	Pro	Gly	Ser	Tyr	Tyr	Pro	Gly	Pro	Pro	20
				25					30						35
Asn	Ser	Gly	Gly	Gln	Tyr	Gly	Ser	Gly	Leu	Pro	Pro	Gly	Gly	Gly	40
				35					40						45
Tyr	Gly	Gly	Pro	Ala	Pro	Gly	Gly	Pro	Tyr	Gly	Pro	Pro	Ala	Gly	50
				55					60						65
Gly	Gly	Pro	Tyr	Gly	His	Pro	Asn	Pro	Gly	Met	Phe	Pro	Ser	Gly	70
				65					70						75
Phe	Pro	Gly	Gly	Pro	Tyr	Gly	Gly	Ala	Ala	Pro	Gly	Gly	Pro	Tyr	80
				85					90						95
Gly	Gln	Pro	Pro	Pro	Ser	Ser	Tyr	Gly	Ala	Gln	Gln	Pro	Gly	Leu	100
				95					100						105
Tyr	Gly	Gln	Gly	Gly	Ala	Pro	Pro	Asn	Val	Asp	Pro	Gly	Ala	Gly	110
				110					115						120
Ser	Trp	Phe	Gln	Ser	Val	Asp	Ser	Asp	His	Ser	Gly	Tyr	Ile	Ser	

	115	130	145
Met Lys Glu Leu	Lys Gln Ala Leu Val	Asn Cys Asn Trp Ser	Ser
	140	145	150
Phe Asn Asp Glu	Thr Cys Leu Met Met	Ile Asn Met Phe Asp	Lys
	155	160	165
Thr Lys Ser Gly	Arg Ile Asp Val Tyr	Gly Phe Ser Ala Leu	Trp
	170	175	180
Lys Phe Ile Gln	Gln Trp Lys Asn Leu	Ile Gln Gln Tyr Asp	Arg
	185	190	195
Asp Arg Ser Gly	Ser Ile Ser Tyr Thr	Gln Leu Gln Gln Ala	Leu
	200	205	210
Ser Gln Met Gly	Tyr Asn Leu Ser Pro	Gln Phe Thr Gln Leu	Leu
	215	220	225
Val Ser Arg Tyr	Cys Pro Arg Ser Ala	Asn Pro Ala Met Gln	Leu
	230	235	240
Asp Arg Phe Ile	Gln Val Cys Thr Gln	Leu Gln Val Leu Thr	Glu
	245	250	255
Ala Phe Arg Gln	Lys Asp Thr Ala Val	Gln Gly Asn Ile Arg	Leu
	260	265	270
Ser Phe Glu Asp	Phe Val Thr Met Thr	Ala Ser Arg Met Leu	
	275	280	

<210> 5'

<211> 1734

<212> DNA

<213> Homo Sapien

<210> 5'

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gaggagaaag tttccaaaaa ctccgggacc aacttgcctc agctcggaca 150

acctctctcc actggccct ctaactctga acatccgcag ccgctcttg 200

acctaagtc taatgacttg gcaagggttc ctctgaagct cagcgtgct 250

ccatcajatg gcttccacc tgcaggaggt tctgcagtgc agaggtggcc 300

tccatcgtgg gggctgcctg ccctggattc ctggccctcc gaggatcctt 350

ggcagatgat ggcctgctgc gctcaggacc gctcggggga agcctgct 400

gaagaactct cttaactctc cagtgcctgc gctcgcctc cgggcagtgc 450

ccctttgcct ggggagctct ctcccgatgc cacaggcctc tcactgagg 500

cttaactctc cctcagggtc tgggagtcga ggcgcctgc cggctcctaat 550

tcactggag cggggggaaa aatcctttcc caagccctc cctggctct 600

cctccacagg gttctgcctg atcaccctc gggtaacctg aatccacagt 650

tgtctctgggg aggtggaggc cctgggactg gttgggggac gagccccatg 700  
 ccacacccctg aggggaatctg gggtatcaat aatcaacccc caggtaccag 750  
 ctgggggaaat attaatccgt atccaggagg cagctgggga aatattaatc 800  
 ggtatccagg aggcagctcg gggaatatta atcggtatcc aggaggccagc 850  
 tggggggaata ctcctctata cccaggtata aataacccat ttcctctctg 900  
 agttctccgc cctctctggt attcttggaa cctccagct ggcttcccta 950  
 atcttccaag ccttaggttg cagtggggct agagcagat agagggaaac 1000  
 ccaacattgg gagttagagt cctgctcccg ccccttggctg tgtgggctca 1050  
 atccaggccc tgttaacatg tttccagcac tatccccact tttcagtgc 1100  
 tccctctctc atctccata aaataaaagc acttatgaaa aaaaaaaaaa 1150  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1200  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1234

110 - 64  
 111 - 385  
 112 - ERT  
 113 - Homo Sapien

1400 - 64  
 Met Gln Gly Arg Val Ala Gly Ser Cys Ala Pro Leu Gly Leu Leu  
 1 5 10 15  
 Leu Val Cys Leu His Leu Pro Gly Leu Phe Ala Arg Ser Ile Gly  
 20 25 30  
 Val Val Glu Glu Lys Val Ser Gln Asn Phe Gly Thr Asn Leu Pro  
 35 40 45  
 Gln Leu Gly Gln Pro Ser Ser Thr Gly Pro Ser Asn Ser Glu His  
 50 55 60  
 Pro Gln Pro Ala Leu Asp Pro Arg Ser Asn Asp Leu Ala Arg Val  
 65 70 75  
 Pro Leu Lys Leu Ser Val Pro Pro Ser Asp Gly Phe Pro Pro Ala  
 80 85 90  
 Gly Gly Ser Ala Val Gln Arg Trp Pro Pro Ser Trp Gly Leu Pro  
 95 100 105  
 Ala Met Asp Ser Trp Pro Pro Glu Asp Pro Trp Gln Met Met Ala  
 110 115 120  
 Ala Ala Ala Glu Asp Arg Leu Gly Glu Ala Leu Pro Glu Glu Leu  
 125 130 135  
 Ser Tyr Leu Ser Ser Ala Ala Ala Leu Ala Pro Gly Ser Gly Pro  
 140 145 150  
 Leu Pro Gly Glu Ser Ser Pro Asp Ala Thr Gly Leu Ser Pro Glu  
 155 160 165

Ala Ser Leu Leu His Gln Asp Ser Glu Ser Arg Arg Leu Pro Arg	170	175	180
Ser Asn Ser Leu Gly Ala Gly Gly Lys Ile Leu Ser Gln Arg Pro	185	190	195
Pro Trp Ser Leu Ile His Arg Val Leu Pro Asp His Pro Trp Gly	200	205	210
Thr Leu Asn Pro Ser Val Ser Trp Gly Gly Gly Gly Pro Gly Thr	215	220	225
Gly Trp Gly Thr Arg Pro Met Pro His Pro Glu Gly Ile Trp Gly	230	235	240
Ile Asn Asn Gln Pro Pro Gly Thr Ser Trp Gly Asn Ile Asn Arg	245	250	255
Tyr Pro Gly Gly Ser Trp Gly Asn Ile Asn Arg Tyr Pro Gly Gly	260	265	270
Ser Trp Gly Asn Leu Asn Arg Tyr Pro Gly Gly Ser Trp Gly Asn	275	280	285
Ile His Leu Tyr Pro Gly Ile Asn Asn Pro Phe Pro Pro Gly Val	290	295	300
Leu Arg Pro Pro Gly Ser Ser Trp Asn Ile Pro Ala Gly Phe Pro	305	310	315
Asn Pro Pro Ser Pro Arg Leu Gln Trp Gly	320	325	

<110> 65  
 <111> 412  
 <112> DNA  
 <113> Homo Sapien

<400> 65  
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 ggccactatg gggctcgggc tgcacctgtt cctctctctt accctccttg 100  
 gcagctcaca tgggaacagg ccgggtatga ctttgcaact gaagctgaag 150  
 gaggctcttc tgacaaatcc ctctatgag tccagtctcc tgggaattgc 200  
 tgaaaaactc tgcctctccc tccatctccc ttcagggaac agcgtaacc 250  
 tccacctgca aagatcccaa caccatgttg tctgcaacac atgacagcca 300  
 ttgaagctcg tgcctctctt ggccggggct tttggccgg ggatgcagga 350  
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 ataaataaaa ttcggtatgc tg 422

<110> 65  
 <111> 73  
 <112> PRT  
 <113> Homo Sapien

<400> 66

Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly  
1 5 10 15  
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu  
20 25 30  
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu  
35 40 45  
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly  
50 55 60  
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val  
65 70 75  
Cys Asn Thr

<410> 67

<411> 744

<412> DNA

<413> Homo Sapien

<400> 67

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ccggtaggag gggcgagcgc gagaagcccc ttccctggcg ctgcacaacc 150  
cccaaccagt ccctggcgaa ccccgggctg gggctgcttc tggcgctggg 200  
catccgttc ctgctggccc gctggggcgc agcctggggg caaatadaga 250  
ccattctgc aaatgagaat agcactgttt tgccttcctc caacagctcc 300  
tgcctcgatg gcaacctggg ccgggaagcc atcactgcta ccactgtggt 350  
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caaggagaag gtgcagggtt gactgacct ctaggccccc tctcctgcct 550  
ctgtctccct tcattgtgt gtgaccttgg ggaaaggcag tgcctctctt 600  
gggtagtcag atccaccag tgcctaatag cagggaagaa ggtacttcaa 650  
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ctttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<410> 68

<411> 123

<412> PRT

<413> Homo Sapien

<400> 68

Met Ala Asn Pro Gly Leu Gly Leu Leu Leu Ala Leu Gly Leu Pro  
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Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr	10	25	30
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser	35	40	45
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile	50	55	60
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly	65	70	75
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu	80	85	90
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala	95	100	105
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys	110	115	120
Leu	Pro	Ile															

(0110): 69  
 (0111): 37 65  
 (0112): DNA  
 (0113): Homo Sapien

(0100): 69  
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 cccttttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcatthaagc 100  
 tgaataataa tggttttgaa gatattgtca ttgttataga tcttagtggtg 150  
 ccagaaagatg aaaaaataat tgaacaaata gaggatatgg tgaactacagc 200  
 ttccacgtac ctgtttgag ccacagaaaa aagatctttt ttcaaaaaatg 250  
 tatctatatt aattccctgag aattgggaagg aaaatcctca gtacaaaaagg 300  
 ccacaaacatg aaaaaccataa acatgctgat gttatagttg caccacctac 350  
 actccaggtt agagatgaac catacaccaa gcagttcaca gaatgtggag 400  
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 cctccgggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctaac 550  
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 atgcagaatt gattctacaa caaaaactgta tggaaaagat tgtcaattct 700  
 ctcttgataa agtataaaaa gaaacattat cttatctctt ttgtgaaagt 750  
 attgattctg ttgttgaatt ttgtaacgaa aaaacccata atcaagaagc 800

tccaagccta caaaacataa agtgcaatth tagaagtaca tgggaggtga 850  
 tttagcaatto ttaggatttht aaaaacacca taacataggt gacacacact 900  
 cctcacactg tctttctcatt gctgaagato agtcaaaagaa ttgtgtgttt 950  
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 aatccaaata aaaagcagtg atgaagaaa cacactcatg gcaggattac 1150  
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 tgcgaaggcg gccacttggg cacaacatct tcaagccaaa gccaaaccag 1750  
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 ccaatcacag tgaatgctaa aatgaataag gacgtaaaac gtttccccag 1850  
 cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900  
 gagccaatgt gactgttttc attgaatcac agaatggaca tacagaagtt 1950  
 ctggaacttt tggataatgg tgcaggcgct gatcttttca agaattgatgg 2000  
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 aattgaagca aacccgcca gacctgaat tgatgaggat actcagacca 2200  
 ccttggagga ttccagccga acagcatccg gaggtgcatt tgtggtatca 2250  
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 attgcatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600  
 cattgcacaa gtaactttgt ttatccctca agcaaatcct gatgacattg 2650  
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 aaatcttcaa gtagacctag aagagaggtt taaaaaacia aacaatgtaa 2850  
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 aacactcatg gatatgttaa aactgtcaag attaaaattt aatagittca 3000  
 tttatttggt attttatitg taagaaatag tcatgaacaa agatcctttt 3050  
 tcatactgat acctgggtgt atattatttg atgcaacagt tttctgaaat 3100  
 gatatttcaa attgcataca gaaattaaaa tcatctatct gagtagtcaa 3150  
 aatacaagta aaggagagca aataaacaac atttggaaaa aaaaaaaaaa 3200  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250  
 aaaaaaaaaa aaaaaa 3265

0110: 73  
 0111: 919  
 0112: FFT  
 0113: Homo Sapien

0400: 70  
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 1 5 10 15  
 Leu His Gln Ser Asn Thr Ser Phe Ile Lys Leu Asn Asn Asn Gly  
 20 25 30  
 Phe Glu Asp Ile Val Ile Val Ile Asp Pro Ser Val Pro Glu Asp  
 35 40 45  
 Glu Lys Ile Ile Glu Gln Ile Glu Asp Met Val Thr Thr Ala Ser  
 50 55 60  
 Thr Tyr Leu Phe Glu Ala Thr Glu Lys Arg Phe Phe Phe Lys Asn  
 65 70 75  
 Val Ser Ile Leu Ile Pro Val Asn Ile Lys Glu Ala Phe Glu Tyr  
 80 85 90  
 Lys Arg Pro Lys His Glu Asn His Lys His Ala Asp Val Ile Val  
 95 100 105



Ala Pro Pro Thr Leu Pro Gly Arg Asp Glu Pro Tyr Thr Lys Gln  
 110 115 120  
 Phe Thr Glu Cys Gly Glu Lys Gly Glu Tyr Ile His Phe Thr Pro  
 125 130 135  
 Asp Leu Leu Leu Gly Lys Lys Gln Asn Glu Tyr Gly Pro Pro Gly  
 140 145 150  
 Lys Leu Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe  
 155 160 165  
 Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr Arg Ala Lys Ser Lys  
 170 175 180  
 Lys Ile Glu Ala Thr Arg Cys Ser Ala Gly Ile Ser Gly Arg Asn  
 185 190 195  
 Arg Val Tyr Lys Cys Gln Gly Gly Ser Cys Leu Ser Arg Ala Cys  
 200 205 210  
 Arg Ile Asp Ser Thr Thr Lys Leu Tyr Gly Lys Asp Cys Gln Ile  
 215 220 225  
 Phe Pro Asp Lys Val Gln Thr Glu Lys Ala Ser Ile Met Phe Met  
 230 235 240  
 Gln Ser Ile Asp Ser Val Val Glu Phe Lys Asn Glu Lys Thr His  
 245 250 255  
 Asn Gln Glu Ala Pro Ser Leu Gln Asn Ile Lys Cys Asn Phe Arg  
 260 265 270  
 Ser Thr Trp Glu Val Ile Ser Asn Ser Glu Asp Phe Lys Asn Thr  
 275 280 285  
 Ile Pro Met Val Inc Pro Pro Pro Pro Pro Val Phe Ser Leu Ile  
 290 295 300  
 Lys Ile Ser Gln Arg Ile Val Cys Leu Val Ile Asp Lys Ser Gly  
 305 310 315  
 Ser Met Gly Gly Lys Asp Arg Leu Asn Arg Met Asn Gln Ala Ala  
 320 325 330  
 Lys His Phe Leu Leu Gln Thr Val Glu Asn Gly Ser Trp Val Gly  
 335 340 345  
 Met Val His Phe Asp Ser Thr Ala Thr Ile Val Asn Lys Leu Ile  
 350 355 360  
 Gln Ile Lys Ser Ser Asp Glu Arg Asn Thr Leu Met Ala Gly Leu  
 365 370 375  
 Pro Thr Tyr Pro Leu Gly Gly Thr Ser Ile Cys Ser Gly Ile Lys  
 380 385 390  
 Tyr Ala Phe Gln Val Ile Gly Gln Leu His Ser Gln Ile Asp Gly  
 395 400 405  
 Ser Glu Val Leu Leu Leu Thr Asp Gly Glu Asp Asn Thr Ala Ser  
 410 415 420

Ser Cys Ile Asp Glu Val Lys Gln Ser Gly Ala Ile Val His Phe  
 425 430 435  
 Ile Ala Leu Gly Arg Ala Ala Asp Glu Ala Val Ile Glu Met Ser  
 440 445 450  
 Lys Ile Thr Gly Gly Ser His Phe Tyr Val Ser Asp Glu Ala Gln  
 455 460 465  
 Asn Asn Gly Leu Ile Asp Ala Phe Gly Ala Leu Thr Ser Gly Asn  
 470 475 480  
 Thr Asp Leu Ser Gln Lys Ser Leu Gln Leu Glu Ser Lys Gly Leu  
 485 490 495  
 Thr Leu Asn Ser Asn Ala Trp Met Asn Asp Thr Val Ile Ile Asp  
 500 505 510  
 Ser Thr Val Gly Lys Asp Thr Phe Phe Leu Ile Thr Trp Asn Ser  
 515 520 525  
 Leu Pro Pro Ser Ile Ser Leu Trp Asp Phe Ser Gly Thr Ile Met  
 530 535 540  
 Glu Asn Phe Thr Val Asp Ala Thr Ser Lys Met Ala Tyr Leu Ser  
 545 550 555  
 Ile Pro Gly Thr Ala Lys Val Gly Thr Trp Ala Tyr Asn Leu Gln  
 560 565 570  
 Ala Lys Ala Asn Phe Glu Thr Leu Thr Ile Thr Val Thr Ser Arg  
 575 580 585  
 Ala Ala Asn Ser Ser Val Pro Pro Ile Thr Val Asn Ala Lys Met  
 590 595 600  
 Asn Lys Asp Val Asn Ser Phe Pro Ser Phe Met Ile Val Tyr Ala  
 605 610 615  
 Glu Ile Leu Gln Gly Tyr Val Pro Val Leu Gly Ala Asn Val Phe  
 620 625 630  
 Ala Phe Ile Glu Ser Gln Asn Gly His Thr Glu Val Leu Glu Leu  
 635 640 645  
 Leu Asp Asn Gly Ala Gly Ala Asp Ser Ile Lys Asn Asp Gly Val  
 650 655 660  
 Tyr Ser Arg Tyr Phe Thr Ala Tyr Thr Leu Asn Gly Arg Tyr Ser  
 665 670 675  
 Leu Lys Val Arg Ala His Gly Gly Ala Asn Thr Ala Arg Leu Lys  
 680 685 690  
 Leu Arg Pro Pro Leu Asn Arg Ala Ala Tyr Ile Pro Gly Trp Val  
 695 700 705  
 Val Asp Gly Glu Ile Gln Arg Asn Phe Leu Arg Pro Glu Thr Trp  
 710 715 720  
 Glu Asp Thr Gln Thr Thr Leu Glu Asp Phe Ser Arg Thr Ala Ser  
 725 730 735

Gly Gly Ala Phe Val Val Ser Gln Val Pro Ser Leu Pro Leu Pro  
 740 745 750  
 Asp Gln Tyr Pro Pro Ser Gln Ile Thr Asp Leu Asp Ala Thr Val  
 755 760 765  
 His Glu Asp Lys Ile Ile Leu Thr Trp Thr Ala Pro Gly Asp Asn  
 770 775 780  
 Phe Asp Val Gly Lys Val Gln Arg Tyr Ile Ile Arg Ile Ser Ala  
 785 790 795  
 Ser Ile Leu Asp Leu Arg Asp Ser Phe Asp Asp Ala Leu Gln Val  
 800 805 810  
 Asn Thr Thr Asp Leu Ser Pro Lys Glu Ala Asn Ser Lys Glu Ser  
 815 820 825  
 Phe Ala Phe Lys Ile Glu Asn Ile Ser Gln Glu Asn Ala Thr His  
 830 835 840  
 Ile Phe Ile Ala Ile Lys Ser Ile Asp Lys Ser Asn Leu Thr Ser  
 845 850 855  
 Lys Val Ser Asn Ile Ala Gln Val Thr Leu Phe Ile Pro Gln Ala  
 860 865 870  
 Asn Pro Asp Asp Ile Asp Pro Thr Pro Thr Pro Thr Pro Thr Pro  
 875 880 885 890 895  
 Thr Pro Asp Lys Ser His Asn Ser Gly Val Asn Ile Ser Thr Leu  
 900 905 910  
 Val Leu Ser Val Ile Gly Ser Val Val Ile Val Asn Phe Ile Leu  
 915 920 925  
 Ser Thr Thr Ile

02100: 71  
 0211: 3877  
 0212: ENA  
 0213: Homo Sapien

0400: 71  
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 aagaccatac gtccccgggc aggggtgaca acaggtgtca tctttttgat 10  
 ctctgtgtgtg gctgccttcc tatttcaagg aaagacgcca aggtaatitt 15  
 gacccagagg agcaatgat tagccacctc ctaaccttcc ctctctgaac 20  
 cccagttat gacaggattt actagagagt gtaactcaa ccagcaadcg 25  
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gcaagatcat cctttaaag tagagaagct gctctgtgtg gtggtaaact 500  
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 cttacctgtt taatataaac aaagtatacc gtcgtgaaca acaatctct 3350  
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 ctatctctca gggggggg agtttttctt atctgttctt cagcctaggc 3500  
 caggtgggaug taactgaatt atttttttaa ttaagcagtt ctactcaatc 3550  
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 tctqtttgct cacagtaaac tcattgttta aaagcttcaa gaacattcaa 3750  
 gctgttggtg tgttaaaaaa tgcattgtat tgatttgtaa tggtagttta 3800  
 tgaattttaa ttaaaacaca ggccatgaat ggaaggtggg attgcacagc 3850  
 taataaaaata tgatttggtg atatgaa 3877

0100: 72

0110: 532

0120: PET

0130: Homo Sapien

0400: 72

Met	Met	Met	Val	Arg	Arg	Gly	Leu	Leu	Ala	Trp	Ile	Ser	Arg	Val
1				5					11					15
Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr
				20					26					30
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu
				35					41					45
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
				50					56					60
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
				65					71					75
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
				80					86					90
Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly
				95					101					105
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu
				110					116					120
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala
				125					131					135
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser
				140					146					150
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Gln	Thr	Gly	Leu	Thr	Arg
				155					161					165
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu
				170					176					180
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala
				185					191					195
Glu	Asn	Ser	Thr	Asp	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile
				200					206					210
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu
				215					220					225

Leu Thr Phe Lys Gly Asp His Lys His Glu Phe Lys Arg Leu Ile	235	235	240
Leu Phe Arg Pro Phe Ser Pro Ile Met Lys Val Lys Asn Glu Lys	241	250	255
Leu Asn Met Ala Asn Thr Leu Ile Asn Val Ile Val Pro Leu Ala	265	265	270
Lys Arg Val Asp Lys Phe Arg Gln Phe Met Gln Asn Phe Arg Glu	275	280	285
Met Cys Ile Glu Gln Asp Gly Arg Val His Leu Thr Val Val Tyr	290	295	300
Phe Gly Lys Glu Gln Ile Asn Glu Val Lys Gly Ile Leu Glu Asn	305	310	315
Thr Ser Lys Ala Ala Asn Phe Arg Asn Phe Thr Phe Ile Gln Leu	321	325	330
Asn Gly Glu Phe Ser Arg Gly Lys Gly Leu Asp Val Gly Ala Arg	335	340	345
Phe Trp Lys Gly Ser Asn Val Leu Leu Phe Phe Cys Asp Val Asp	350	355	360
Ile Tyr Phe Thr Ser Glu Phe Leu Asn Thr Cys Arg Leu Asn Thr	365	370	375
Gln Pro Gly Lys Lys Val Phe Tyr Pro Val Leu Phe Ser Gln Tyr	380	385	390
Asn Pro Gly Ile Ile Tyr Gly His His Asp Ala Val Pro Pro Leu	395	400	405
Glu Gln Gln Leu Val Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp	410	415	420
Phe Gly Phe Gly Met Thr Cys Gln Tyr Arg Ser Asp Phe Ile Asn	425	430	435
Ile Gly Gly Phe Asp Leu Asp Ile Lys Gly Trp Gly Gly Glu Asp	440	445	450
Val His Leu Tyr Arg Lys Tyr Leu His Ser Asn Leu Ile Val Val	455	460	465
Arg Thr Pro Val Arg Gly Leu Phe His Leu Trp His Glu Lys Arg	470	475	480
Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln	485	490	495
Ser Lys Ala Met Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu	500	505	510
Val Phe Arg His Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln	515	520	525
Lys Thr Ser Ser Lys Lys Thr	530		

02108 73  
 02108 1761  
 02108 DNA  
 02108 Homo Sapien

02200  
 02200 unsure  
 02200 1508  
 02200 unknown base

0400 73  
 ja p a c t g a g a g g a g a t a a a g a g a g a g g g c a a a g a g g c a g c a a g a g a t t 50  
 t g t c c t g g g g a t c c a g a a a c c a t g a t a c c c t a c t g a a c a c c a a t c c c c 100  
 t g g a a g c c a c a g a g a c a g a g a c a g a g a g a g a g a g a g a g a g a g a g a g a 150  
 c a c g c c a g g a g c t c g c t c g c t c t c t c t c t c t c t c t c a c t c c t c c t c c 200  
 c t c 250  
 g a c c c c t c c t c t c g g a c a c t a t g t t g t t c t c c g c c t c c t g c t g g a g g t g 300  
 a t t t g g a t c c t g g t g c a g a t g g g g t c a a c a c t g g a c g t a t g a g g g c c c 350  
 a a t g g g t c a g a c c a t t g g c c a g c c t c t t a c c t g a g t g t g g a a c a a t g 400  
 c c c a g t g c c c a t c g a t a t t c a g a c a g a c a g t g t g a c a t t t g a c c c t g a t 450  
 t t c c t c t c t c t g c a g c c c c a c g g a t a t g a c c a g c t g g c a c c a g c c t t t 500  
 g g a c t g c a c a a c a a t g g c a c a c a g t g c a a c t c t c t c t g c c c t c a c c 550  
 t c t a t c t g g g t g g a c t t c c c g a a a t a t g t a g c t g c c a g c t c c a c c t g 600  
 c a c t g g g g t c a g a a g g a t c c c a g g g g g t c a g a a c a c a g a t c a a c a g 650  
 t a a a g c c a c a t t t g c a g a g c t c a c a t t g t a c a t t a t g a c t c t g a t t c c t 700  
 a t g a c a g c t t g a g t g a g g t g c t g a g a g g c c t c a g g g c c t g g c t g t c c t g 750  
 c c r a t c c t a a t t g a g g t g g g t g a g a c t a a g a a t a t a g c t t a t g a a c a c a t 800  
 t t g a g t c a c t t g c a t g a a g t c a g g c a t a a a g a t c a g a a g a c c t c a g t g c 850  
 c t c c c t c a a c c t a a g a g a g c t g c t c c c a a a c a g c t g g g c a g t a c t t c 900  
 c g t a c a a t g g c t c g t c a c a a a c t c c c t t g c t a c c a g a g t g t g c t c t g 950  
 g a c a g t t t t t a t a g a a c g t c c a g a t t t c a a t g g a a c a g c t g g a a a a g c 1000  
 t t c a g g g g a c a t t g t t c t c c a c a g a a g a g g a g c c c t c t a a g c t t c t g g l a 1050  
 c a g a a c t a c c g a g c c t t c a g c t c t c a t c a g c g c a t g g t c t t t g c t t c 1100  
 t t t c a t c c a a g c a g g a t c c t c g t a t a c c a c a g g t g a a a t g c t g a g t c t a g 1150  
 t g t a g a a t c t t g u t t g g g t g t t t t g a t t t c c t c t g g c t a t t a t t t 1200  
 a t t g c t a g a a a g a t t c g g a a g a a g a g g c t g g a a a c c a a a g a g t g t g g t 1250  
 c t t c a c c t c a g c a a a g c a c c a g a n t a g a g g a t a a a t t c c t t c t c a g a t a c 1300



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 t. 1701

210: 74  
 211: 337  
 212: FFT  
 213: Homo Sapien

4400: 74  
 Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala  
 1 5 10 15  
 Ala Asp Gly Gly Gln His Trp Thr Tyr Glu Gly Pro His Gly Gln  
 20 25 30  
 Asp His Trp Pro Ala Ser Tyr Pro Glu Cys Gly Asn Asn Ala Gln  
 35 40 45  
 Ser Pro Ile Asp Ile Gln Thr Asp Ser Val Thr Phe Asp Pro Asp  
 50 55 60  
 Leu Pro Ala Leu Gln Pro His Gly Tyr Asp Gln Pro Gly Thr Glu  
 65 70 75  
 Pro Leu Asp Leu His Asn Asn Gly His Thr Val Gln Leu Ser Leu  
 80 85 90  
 Pro Ser Thr Leu Tyr Leu Gly Gly Leu Pro Arg Lys Tyr Val Ala  
 95 100 105  
 Ala Gln Leu His Leu His Trp Gly Gln Lys Gly Ser Pro Gly Gly  
 110 115 120  
 Ser Glu His Gln Ile Asn Ser Gln Ala Thr Phe Ala Glu Leu His  
 125 130 135  
 Ile Val His Tyr Asp Ser Asp Ser Tyr Asp Ser Leu Ser Glu Ala  
 140 145 150  
 Ala Glu Arg Pro Gln Gly Leu Ala Val Leu Gly Ile Leu Ile Glu  
 155 160 165  
 Val Tyr Glu Thr Lys Asn Ile Ala Tyr Cys His Thr Leu Ser His  
 170 175 180  
 Leu His Glu Val Arg His Lys Asp Gln Lys Thr Ser Val Pro Pro  
 185 190 195

Phe Asn Leu Arg Glu Leu Leu Pro Lys Gln Leu Gly Gln Tyr Phe  
 290 305 310  
 Arg Tyr Asn Gly Ser Leu Thr Thr Pro Pro Cys Tyr Gln Ser Val  
 315 320 325  
 Leu Trp Thr Val Phe Tyr Arg Arg Ser Gln Ile Ser Met Glu Gln  
 330 335 340  
 Leu Glu Lys Leu Gln Gly Thr Leu Phe Ser Thr Glu Glu Glu Phe  
 345 350 355  
 Ser Lys Leu Leu Val Gln Asn Tyr Arg Ala Leu Gln Pro Leu Asn  
 360 365 370  
 Gln Arg Met Val Phe Ala Ser Phe Ile Gln Ala Gly Ser Ser Tyr  
 375 380 385  
 Thr Thr Gly Glu Met Leu Ser Leu Gly Val Gly Ile Leu Val Gln  
 390 395 400  
 Cys Leu Cys Leu Leu Leu Ala Val Tyr Phe Ile Ala Arg Lys Gln  
 405 410 415  
 Arg Lys Lys Arg Leu Glu Asn Arg Lys Ser Val Val Phe Thr Ser  
 420 425 430  
 Ala Gln Ala Thr Thr Glu Ala  
 435

GI10: 75  
 GI11: 1743  
 GI12: DNA  
 GI13: Homo Sapien

3400: 75  
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 ccacacagag gtggcactga ctacagatga gaagtcacatt tctgtttgtc 50  
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 atgtttctgc catatctatt acgggttttttttctgt gatctttttt 120  
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gatttttgatt tatggaaatg aatttgacaa aagattcttt gtgcctgctg 700  
 aaaaaatcgt gattaacttt atcaccctca atatctogga tgattctaaa 750  
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 aacctctga ggggatggg ctccgagagg aggtcttct atctagactc 1350  
 tatggagc cggctccaga cagccacca ggagaaaatg aaacctatct 1400  
 ctgaaatc atggaggaat ggggttata tgtgcagatg gaaaactgat 1450  
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 tctcagtggt ctgtgagaat taactatttc ttttctctat tctcatagca 1600  
 cgttgatgat aggttcagc atgtaggtct cttacaaatg atggtgggac 1650  
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 aaatgtttgc cagactgggt gcagaattta ttcaggtggg tgt 1743

<110> 76  
 <111> 442  
 <112> PHT  
 <113> Homo Sapien

<100> 74  
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 Leu Leu Thr Leu Cys Ser Ile Ser Ser Gln Ile Gly Pro Pro Glu  
 20 25 30  
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr  
 35 40 45  
 Ala Pro Glu Lys Trp Lys Arg Asn Pro Gln Asp Leu Pro Val Ser  
 50 55 60  
 Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu

Asn Thr Lys Ser	Asn Arg Thr Trp Ser	Gln Cys Val Thr Asn His	65	70	75
80	85	90			
Thr Leu Val Leu	Thr Trp Leu Glu Pro	Asn Thr Leu Tyr Cys Val	95	100	105
110	115	120			
His Val Glu Ser	Phe Val Pro Gly Pro	Pro Arg Arg Ala Gln Pro	125	130	135
140	145	150			
Ser Glu Lys Gln	Cys Ala Arg Thr Leu	Lys Asp Gln Ser Ser Gln	155	160	165
170	175	180			
Phe Lys Ala Lys	Ile Ile Phe Trp Tyr	Val Leu Pro Ile Ser Ile	185	190	195
200	205	210			
Thr Val Phe Leu	Phe Ser Val Met Gly	Tyr Ser Ile Tyr Arg Tyr	215	220	225
230	235	240			
Ile His Val Gly	Lys Glu Lys His Pro	Ala Asn Leu Ile Leu Ile	245	250	255
260	265	270			
Tyr Gly Asn Glu	Phe Asp Lys Arg Phe	Phe Val Pro Ala Glu Lys	275	280	285
290	295	300			
Ile Val Ile Asn	Phe Ile Thr Leu Asn	Ile Ser Asp Asp Ser Lys	305	310	315
320	325	330			
Ile Ser His Gln	Asp Met Ser Leu Leu	Gly Lys Ser Ser Asp Val	335	340	345
350	355	360			
Ser Ser Leu Asn	Asp Pro Gln Pro Ser	Gly Asn Leu Arg Pro Ile	365	370	375
380	385	390			
Gln Glu Glu Glu	Glu Val Lys His Leu	Gly Tyr Ala Ser His Ile	395	400	405
410	415	420			
Met Glu Ile Phe	Cys Asp Ser Glu Glu	Asn Thr Glu Gly Thr Ser	425	430	435
440	445	450			
Leu Thr Gln Gln	Gln Ser Leu Ser Arg	Thr Ile Pro Pro Asp Lys	455	460	465
470	475	480			
Thr Val Ile Glu	Tyr Glu Tyr Asp Val	Arg Thr Thr Asp Ile Cys	485	490	495
500	505	510			
Ala Gly Pro Glu	Glu Gln Glu Leu Ser	Leu Gln Glu Glu Val Ser	515	520	525
530	535	540			
Thr Gln Gly Thr	Leu Leu Glu Ser Gln	Ala Ala Leu Ala Val Leu	545	550	555
560	565	570			
Gly Pro Gln Thr	Leu Gln Tyr Ser Tyr	Thr Pro Gln Leu Gln Asp	575	580	585
590	595	600			
Leu Asp Pro Leu	Ala Gln Glu His Thr	Asp Ser Glu Glu Gly Pro	605	610	615
620	625	630			
Gln Glu Glu Pro	Ser Thr Thr Leu Val	Asp Arg Asp Pro Gln Thr	635	640	645
650	655	660			
Gly Arg Leu Cys	Ile Pro Ser Leu Ser	Ser Phe Asp Gln Asp Ser	665	670	675

286

395

396

Glu Gly Cys Glu Pro Ser Glu Gly Asp Gly Leu Gly Glu Glu Gly  
 295 400  
 Leu Leu Ser Arg Leu Tyr Glu Glu Pro Ala Pro Asp Arg Pro Pro  
 410 415  
 Gly Glu Asn Glu Thr Tyr Leu Met Gln Phe Met Glu Glu Trp Gly  
 425 430 435  
 Leu Tyr Val Gln Met Glu Asn  
 440

c210 - 77

c211 - 1636

c212 - DNA

c213 - Homo Sapien

c100 - 77

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 gctgcctctt gacacctggg aagatggccg gcccgctggac cttcaccctt 100  
 ctctgtgggtt tgcctggcagc cacttgatc caagccaccg tcagtccac 150  
 tgcagttctc atctctggcc caaaagtcac caaagaaaag ctgacacagg 200  
 agctgaagga ccacaatgcc accagcatcc tgcagcagct gccgtctgtc 250  
 agtgcacatgc gggaaaagcc agccggagcg atctctgtgc tgggcagcct 300  
 ggtgaacacc gtctctgaagc acatcatctg gctgaaggtc atcacagcta 350  
 acatctctca gctgcaggtg aagccctggg ccaatgaacca ggagctgcta 400  
 gtcaagatcc ccttgacatc ggtggcttga ttcaacacgc ccttggtcaa 450  
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 caccctgggc atogaagcca gctcggaagc tcagttttac accaaagggtg 1250  
 accaacttat actcaacttg aataacatca gctctgtcgc gatccagctg 1300  
 atgaactctg ggattgggtg gttccaacct gatgttctga aaaacatcat 1350  
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 gatctggggg ccagtgcca ttggtgaagg ccttgggatt cgaggcagct 1450  
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2100: 78  
 2110: 484  
 2120: PFT  
 2130: Homo Sapien

2100: 78  
 Met Ala Gly Pro Trp Thr Phe Thr Leu Leu Cys Gly Leu Leu Ala  
 1 5 10 15  
 Ala Thr Leu Ile Gln Ala Thr Leu Ser Pro Thr Ala Val Leu Ile  
 20 25 30  
 Leu Gly Pro Lys Val Ile Lys Glu Lys Leu Thr Gln Glu Leu Lys  
 35 40 45  
 Asp His Asn Ala Thr Ser Ile Leu Gln Gln Leu Pro Leu Leu Ser  
 50 55 60  
 Ala Met Arg Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser  
 65 70 75  
 Leu Val Asn Thr Val Leu Lys His Ile Ile Trp Leu Lys Val Ile  
 80 85 90  
 Thr Ala Asn Ile Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp  
 95 100 105  
 Gln Glu Leu Leu Val Lys Ile Pro Leu Asp Met Val Ala Gly Phe  
 110 115 120  
 Asn Thr Pro Leu Val Lys Thr Ile Val Glu Phe His Met Thr Thr  
 125 130 135  
 Glu Ala Gln Ala Thr Ile Arg Met Asp Thr Ser Ala Ser Gly Pro  
 140 145 150  
 Thr Arg Leu Val Leu Ser Asp Cys Ala Thr Ser Ser Gly Ser Leu  
 155 160 165  
 Arg Ile Gln Leu Leu Tyr Lys Leu Ser Phe Leu Val Asn Ala Leu

176	175	180
Ala Lys Gln Val Met Asn Leu Leu Val	Pro Ser Leu Pro Asn Leu	
115	115	115
Val Lys Asn Gln Leu Cys Pro Val Ile	Glu Ala Ser Phe Asn Gly	
210	210	210
Met Tyr Ala Asp Leu Leu Gln Leu Val	Lys Val Pro Ile Ser Leu	
215	215	215
Ser Ile Asp Arg Leu Glu Phe Asp Leu	Leu Tyr Pro Ala Ile Lys	
220	220	220
Gly Asp Thr Ile Gln Leu Tyr Leu Gly	Ala Lys Leu Leu Asp Ser	
225	225	225
Gln Gly Lys Val Thr Lys Trp Phe Asn	Asn Ser Ala Ala Ser Leu	
230	230	230
Thr Met Pro Thr Leu Asp Asn Ile Pro	Ile Ser Leu Ile Val Ser	
235	235	235
Gln Asp Val Val Lys Ala Ala Val Ala	Ala Val Leu Ser Pro Glu	
240	240	240
Glu Phe Met Val Leu Leu Asp Ser Val	Leu Pro Glu Ser Ala His	
245	245	245
Arg Leu Lys Ser Ser Ile Gly Leu Ile	Asn Glu Lys Ala Ala Asp	
250	250	250
Lys Leu Gly Ser Thr Gln Ile Val Lys	Ile Leu Thr Gln Asp Thr	
255	255	255
Pro Glu Phe Phe Ile Asp Gln Gly His	Ala Lys Val Ala Gln Leu	
260	260	260
Ile Val Leu Glu Val Phe Pro Ser Ser	Glu Ala Leu Arg Pro Leu	
265	265	265
Phe Thr Leu Gly Ile Glu Ala Ser Ser	Glu Ala Gln Phe Tyr Thr	
270	270	270
Lys Gly Asp Gln Leu Ile Leu Asn Leu	Asn Asn Ile Ser Ser Asp	
275	275	275
Arg Ile Gln Leu Met Asn Ser Gly Ile	Gly Trp Phe Gln Pro Asp	
280	280	280
Val Leu Lys Asn Ile Ile Thr Glu Ile	Ile His Ser Ile Leu Leu	
285	285	285
Pro Asn Gln Asn Gly Lys Leu Arg Ser	Gly Val Pro Val Ser Leu	
290	290	290
Val Lys Ala Leu Gly Phe Glu Ala Ala	Glu Ser Ser Leu Thr Lys	
295	295	295
Asp Ala Leu Val Leu Thr Ile Ala Ser	Leu Lys Lys Trp Ser Leu	
300	300	300
Pro Val Ser Gln		

(210) 79  
 (211) 1475  
 (212) DNA  
 (213) Homo Sapien

(210) 79  
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 cctctctct gctctttagc gctctttagc tcattgctgg gcatcggaag 1350  
 actccacagt gtcacagca atttggtgcat gcaatgcaat aaaaaccatc 1400



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gcagcctggg acatttaaaa aaata 1475

<210> 30

<211> 240

<212> PRT

<213> Homo Sapien

<400> 30

Met Ala Ser Leu Gly Leu Gln Leu Val Gly Tyr Ile Leu Gly Leu  
1 10 15

Leu Gly Leu Leu Gly Thr Leu Val Ala Met Leu Leu Pro Ser Trp  
16 25 30

Lys Thr Ser Ser Tyr Val Gly Ala Ser Ile Val Thr Ala Val Gly  
36 45 48

Phe Ser Lys Gly Trp Trp Met Glu Cys Ala Thr His Ser Thr Gly  
54 60 66

Ile Thr Gln Cys Asp Ile Tyr Ser Thr Leu Leu Gly Leu Pro Ala  
66 75 81

Asp Ile Gln Ala Ala Gln Ala Met Met Val Thr Ser Ser Ala Ile  
87 96 102

Ser Ser Leu Ala Cys Ile Ile Ser Val Val Gly Met Arg Cys Thr  
108 117 123

Val Phe Cys Gln Gln Ser Arg Ala Lys Asp Arg Val Ala Val Ala  
129 138 144

Gly Gly Val Phe Phe Ile Leu Gly Gly Leu Leu Gly Phe Ile Pro  
150 159 165

Val Ala Trp Asn Leu His Gly Ile Leu Arg Asp Phe Tyr Ser Pro  
166 175 181

Leu Val Pro Asp Ser Met Lys Phe Glu Ile Gly Glu Ala Leu Tyr  
187 196 202

Leu Gly Ile Ile Ser Ser Leu Phe Ser Leu Ile Ala Gly Ile Ile  
203 212 218

Leu Cys Phe Ser Cys Ser Ser Gln Arg Asn Arg Ser Asn Tyr Tyr  
219 228 234

Asp Ala Tyr Gln Ala Gln Pro Leu Ala Thr Arg Ser Ser Pro Arg  
240 249 255

Pro Gly Gln Pro Pro Lys Val Lys Ser Gln Phe Asn Ser Tyr Ser  
256 265 271

Leu Thr Gly Tyr Val  
280 230

<210> 30

<211> 1432

<212> DNA

<213> Homo Sapien

<460> 81

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cttagacctc ctttcttgcc ctcccttctc gccacccgt gttctctggc 150  
cttctctcca ccccgctctc gcagcagacc tctggggctc tgtgggttga 200  
cttctggccc ctgttctctc gtgtcttctt cgtctccctt cctcccgact 250  
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acatactcc ccggcgagag ctggcaccc tacttggagc cacaaggct 450  
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acgctctca ctctccgctt gtcactgac cccagctgt gacggagcca 550  
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gccccacca aagtcttgc agcacaacgg gacctgtac caacacggag 650  
ajactctag tgcctatgag ctgttccct cccgctgccc caaccagtg 700  
gtctctgca gctgacaga gggccagatc tactcgggcc tcacaactg 750  
cccgaacca ggttcccaj caccctccc actgacagac tctgcttcc 800  
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agtggctgg aagtgtgca agatttccc agaggacaaa gcagacctg 1250  
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cctctctga ggaactgag gctcagagag atgagttct tggcctcagg 1450  
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<100> 82  
 <110> 451  
 <120> EFT  
 <130> Homo Sapien

<100> 12  
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 Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp  
 20 25 30  
 Met Pro Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser  
 35 40 45  
 Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg  
 50 55 60  
 Cys Thr Cys Ser Gln Gly Ala His Val Ser Cys Tyr Arg Leu His  
 65 70 75  
 Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln  
 80 85 90  
 Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg  
 95 100 105  
 Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His  
 110 115 120  
 Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro  
 125 130 135  
 Asn Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys  
 140 145 150  
 Gly Leu Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro  
 155 160 165  
 Leu Pro Asp Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu  
 170 175 180  
 Gln Ser Asp Glu Gln Asp Ser Val Gln Ser Leu His Gly Val Arg  
 185 190 195  
 His Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly  
 200 205 210  
 Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro Leu Ser Phe  
 215 220 225  
 Ile Pro Arg His Phe Arg Pro Lys Gly Ala Gly Ser Thr Thr Val  
 230 235 240

Lys	Ile	Val	Leu	Lys	Glu	Lys	His	Lys	Lys	Ala	Cys	Val	His	Gly
				245					250					255
Gly	Lys	Thr	Tyr	Met	His	Gly	Glu	Val	Trp	His	Pro	Ala	Phe	Arg
				260					265					270
Ala	Phe	Gly	Pro	Leu	Pro	Cys	Ile	Leu	Cys	Thr	Cys	Glu	Asp	Gly
				275					280					285
Arg	Gln	Asp	Cys	Gln	Arg	Val	Thr	Cys	Pro	Thr	Glu	Tyr	Pro	Cys
				290					295					300
Arg	His	Pro	Glu	Lys	Val	Ala	Gly	Lys	Lys	Cys	Lys	Ile	Cys	Arg
				305					310					315
Glu	Asp	Lys	Ala	Asp	Pro	Gly	His	Ser	Glu	Ile	Ser	Ser	Thr	Arg
				320					325					330
Cys	Pro	Lys	Ala	Pro	Gly	Arg	Val	Leu	Val	His	Thr	Ser	Val	Ser
				335					340					345
Pro	Ser	Pro	Asp	Asn	Met	Arg	Arg	Phe	Ala	Leu	Glu	His	Glu	Arg
				350					355					360
Ser	Asp	Leu	Val	Gln	Ile	Tyr	Leu	Trp	Lys	Leu	Val	Lys	Asp	Gln
				365					370					375
Glu	Thr	Glu	Ala	Gln	Arg	Gly	Glu	Val	Pro	Gly	Pro	Arg	Pro	His
				380					385					390
Ser	Gln	Asn	Leu	Pro	Leu	Asp	Ser	Asp	Gln	Glu	Ser	Gln	Glu	Ala
				395					400					405
Arg	Leu	Pro	Glu	Arg	Gly	Thr	Ala	Leu	Pro	Thr	Ala	Arg	Trp	Pro
				410					415					420
Pro	Arg	Arg	Ser	Leu	Glu	Arg	Leu	Pro	Ser	Pro	Asp	Pro	Gly	Ala
				425					430					435
Gln	Gly	His	Gly	Gln	Ser	Arg	Gln	Ser	Asp	Gln	Asp	Ile	Thr	Lys
				440					445					450

Thr

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 <110> 2052  
 <110> DNA  
 <110> Homo Sapien

<400> 53  
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 ccgctcagcg agagcctctc cgtcgcttcc gcaccttgag cattaggcca 100  
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 aa 2052

(2100) 84  
 (2110) 500  
 (2120) PRT  
 (2130) Homo Sapien

(2100) 84  
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 Ser Val Gly Glu Asp Ala Ala Phe Ser Cys Phe Leu Ser Pro Lys  
 35 40 45  
 Thr Asn Ala Glu Ala Met Glu Val Arg Phe Phe Arg Gly Gln Phe  
 50 55 60  
 Ser Ser Val Val His Leu Tyr Arg Asp Gly Lys Asp Gln Pro Phe  
 65 70 75  
 Met Gln Met Pro Gln Tyr Gln Gly Arg Thr Lys Leu Val Lys Asp  
 80 85 90  
 Ser Ile Ala Glu Gly Arg Ile Ser Leu Arg Leu Glu Asn Ile Thr  
 95 100 105  
 Val Leu Asp Ala Gly Leu Tyr Gly Cys Arg Ile Ser Ser Gln Ser  
 110 115 120  
 Tyr Tyr Gln Lys Ala Ile Trp Glu Leu Gln Val Ser Ala Leu Gly  
 125 130 135  
 Ser Val Pro Leu Ile Ser Ile Thr Gly Tyr Val Asp Arg Asp Ile  
 140 145 150  
 Gln Leu Leu Cys Gln Ser Ser Gly Trp Phe Pro Arg Pro Thr Ala  
 155 160 165  
 Lys Trp Lys Gly Pro Gln Gly Gln Asp Leu Ser Thr Asp Ser Arg  
 170 175 180  
 Thr Asn Arg Asp Met His Gly Leu Phe Asp Val Glu Ile Ser Leu  
 185 190 195  
 Thr Val Gln Glu Asn Ala Gly Ser Ile Ser Cys Ser Met Arg His  
 200 205 210  
 Ala His Leu Ser Arg Glu Val Glu Ser Arg Val Gln Ile Gly Asp  
 215 220 225  
 Thr Phe Phe Glu Pro Ile Ser Trp His Leu Ala Thr Lys Val Leu  
 230 235 240

Gly Ile Leu Cys Cys Gly Leu Phe Phe Gly Ile Val Gly Leu Lys  
 245 250 255  
 Ile Phe Phe Ser Lys Phe Gln Trp Lys Ile Gln Ala Glu Leu Asp  
 260 265 270  
 Trp Arg Arg Lys His Gly Gln Ala Glu Leu Arg Asp Ala Arg Lys  
 275 280 285  
 His Ala Val Glu Val Thr Leu Asp Pro Glu Thr Ala His Pro Lys  
 290 295 300  
 Leu Cys Val Ser Asp Leu Lys Thr Val Thr His Arg Lys Ala Phe  
 305 310 315  
 Gln Glu Val Pro His Ser Glu Lys Arg Phe Thr Arg Lys Ser Val  
 320 325 330  
 Val Ala Ser Gln Ser Phe Gln Ala Gly Lys His Tyr Trp Glu Val  
 335 340 345  
 Asp Gly Gly His Asn Lys Arg Trp Arg Val Gly Val Cys Arg Asp  
 350 355 360  
 Asp Val Asp Arg Arg Lys Glu Tyr Val Thr Leu Ser Pro Asp His  
 365 370 375  
 Gly Tyr Trp Val Leu Arg Leu Asn Gly Glu His Leu Tyr Phe Thr  
 380 385 390  
 Leu Asn Pro Arg Phe Ile Ser Val Phe Pro Arg Thr Pro Pro Thr  
 395 400 405  
 Lys Ile Gly Val Phe Leu Asp Tyr Glu Lys Gly Thr Ile Ser Ile  
 410 415 420  
 Phe Asn Ile Asn Asp Gln Ser Leu Ile Tyr Thr Leu Thr Cys Arg  
 425 430 435  
 Phe Glu Gly Leu Leu Arg Pro Tyr Ile Glu Tyr Pro Ser Tyr Asn  
 440 445 450  
 Glu Gln Asn Gly Thr Pro Ile Val Ile Lys Pro Val Thr Gln Glu  
 455 460 465  
 Ser Glu Lys Glu Ala Ser Trp Gln Arg Ala Ser Ala Ile Pro Glu  
 470 475 480  
 Thr Ser Asn Ser Glu Ser Ser Ser Gln Ala Thr Thr Pro Phe Leu  
 485 490 495  
 Pro Arg Gly Glu Met  
 500

<10> 85  
 <11> 1665  
 <12> DNA  
 <13> Homo Sapien

<100> 85  
 aacaqacgtt cctcgcgggc cctggcacct ctaccccccag acatgctgct 50  
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gtaaaetget gaagatgag agttcoctga cggtagcagga aggcctgtgt 150  
 gtcacatgtgc cctgctcctt ctctacccc tocatggct ggatttacc 200  
 tggcccagta gttcatggct actggttccg ggaaggggc aatacagacc 250  
 aggatgctcc agtgjccaca aacaacccag ctggggagtl gtgggaggag 200  
 actggggacc gattccacct cctgggggac ccacatacca agaattgcac 350  
 cctgagcatc agagatgcca gaagaagtda tggggggaga tactcttct 400  
 gtatggagaa aggaagkata aaatggaaat ataacatca ccggctctct 450  
 gtgaatgtca caccctgac ccacaggccc aacatctca tccaggccac 500  
 cctggagtc cgtggccccc agaattgac ctgctctgtg cctggggct 550  
 gtccagagg gacacccct atgctctct gataaggac ctccgtgtcc 600  
 cctgggac cctccaccac ccctctctcg gtgcttacc tatccaca 650  
 gcccaggac catggacca gctccactg ttaggtgac ttccctgggg 700  
 ccagctgac caggaacaag accgttctc tcaactctc ctaccggct 750  
 cagaactga ccagactgt ctcccaaga gacggccag tatccacgt 800  
 cttgggaat gctcactct tgcactccc agagggccag tctctggcc 850  
 tggctgtgc agtgatgca gttgacagca atctccctgc caggctgagc 900  
 ctgactgga gaggctgac cctgtgccc ccacagcct caaacccggg 950  
 gctgtgtgag ctcccttggg tgcacctgag gcatgcat gaattccct 1000  
 gacagctca gacccctc gctctcagc aggtctact gaactctcc 1050  
 ctgcagagca aagccacac aggagtgaat cagggggtgg tggggggagc 1100  
 tggagccaca cccctgctct tctgtcct ctggctcct ttgctgtag 1150  
 tgggtcttg caggaagaaa tgggaaggc cagcagggg cgtgggagat 1200  
 accggcatag aggatgcaaa cgtgtcagg ggttcacct ctacggggcc 1250  
 cctgactgaa cctggggcag aagacgtcc ccagagccag cctcccccag 1300  
 cttctgccc ctctcagtg ggggaaggag agctccagta tgcctcctc 1350  
 agcttcaca tggtaagcc ttgggactcg cggggacag aggcactga 1400  
 caccaggtac caggagatca agatccacag atgagaaact gcagagactc 1450  
 acctgattg agggatcaca gcccctccag gcaagggaga agtcagaggc 1500  
 ttaatttgt aacttaca cccctcaac tcatgagta tgataacct 1550  
 atgaattat tggagagtga aaagacaca ggccttagag tcaagctat 1600  
 tcaaacctga atccacactg tgcctccct tttattttt taactaaaag 1650



acagacaaat tocta 1065

0210 - 86

0211 - 463

0212 - PEF

0213 - Homo Sapien

0400 - 86

Met Leu Leu Leu Leu Leu Pro Leu Leu Trp Gly Arg Glu Arg Ala  
1 3 14 15

Gln Gly Gln Thr Ser Lys Leu Leu Thr Met Gln Ser Ser Val Thr  
28 29 30

Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser Phe Ser Tyr  
35 44 45

Pro Ser His Gly Trp Ile Tyr Pro Gly Phe Val Val His Gly Tyr  
50 51 52

Trp Phe Arg Glu Gly Ala Asn Thr Asp Gln Asp Ala Pro Val Ala  
57 58 59

Thr Asn Asn Pro Ala Arg Ala Val Trp Gln Glu Thr Arg Asp Arg  
64 65 66

Phe His Leu Leu Gly Asp Pro His Thr Lys Asn Cys Thr Leu Ser  
73 74 75

Ile Arg Asp Ala Asn Arg Ser Asp Ala Gly Arg Tyr Phe Phe Arg  
81 82 83

Met Glu Lys Gly Ser Ile Lys Trp Asn Tyr Lys His His Arg Leu  
88 89 90

Ser Val Asn Val Thr Ala Leu Thr His Arg Pro Asn Ile Leu Ile  
96 97 98

Pro Gly Thr Leu Gln Ser Gly Cys Pro Gln Asn Leu Thr Cys Ser  
103 104 105

Val Pro Trp Ala Cys Glu Gln Gly Thr Pro Pro Met Ile Ser Trp  
110 111 112

Ile Gly Thr Ser Val Ser Pro Leu Asp Pro Ser Thr Thr Arg Ser  
118 119 120

Ser Val Leu Thr Leu Ile Pro Gln Pro Gln Asp His Gly Thr Ser  
126 127 128

Leu Thr Cys Gln Val Thr Phe Pro Gly Ala Ser Val Thr Thr Asn  
133 134 135

Lys Thr Val His Leu Asn Val Ser Tyr Phe Pro Gln Asn Leu Thr  
140 141 142

Met Thr Val Phe Gln Gly Asp Gly Thr Val Ser Thr Val Leu Gly  
148 149 150

Asn Gly Ser Ser Leu Ser Leu Pro Gln Gly Val Ser Ser Arg Leu  
156 157 158

Val Cys Ala Val Asp Ala Val Asp Ser Leu Pro Pro Ala Arg Leu  
163 164 165

275	280	285
Ser Leu Ser Trp Arg Gly Leu Thr Leu Cys Pro Ser Gln Pro Ser		
290	295	300
Asn Pro Gly Val Leu Glu Leu Pro Trp Val His Leu Arg Asp Ala		
305	310	315
Ala Glu Phe Thr Cys Arg Ala Gln Asn Phe Leu Gly Ser Gln Gln		
320	325	330
Val Tyr Leu Asn Val Ser Leu Gln Ser Lys Ala Thr Ser Gly Val		
335	340	345
Thr Gln Gly Val Val Gly Gly Ala Gly Ala Thr Ala Leu Val Ile		
350	355	360
Leu Ser Phe Cys Val Ile Phe Val Val Val Arg Ser Cys Arg Lys		
365	370	375
Lys Ser Ala Arg Pro Ala Ala Gly Val Gly Asp Thr Gly Ile Gln		
380	385	390
Asp Ala Asn Ala Val Arg Gly Ser Ala Ser Gln Gly Pro Leu Thr		
395	400	405
Glu Pro Trp Ala Glu Asp Ser Pro Pro Asn Gln Pro Pro Pro Ala		
410	415	420
Ser Ala Arg Ser Ser Val Gly Glu Gly Glu Leu Gln Tyr Ala Ser		
425	430	435
Leu Ser Phe Gln Met Val Lys Pro Trp Asp Ser Arg Gly Gln Ile		
440	445	450
Ala Thr Asp Thr Glu Tyr Ser Glu Ile Lys Ile His Arg		
455	460	

(110): 87  
 (111): 1176  
 (112): DNA  
 (113): Homo Sapien

(140): 87  
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 aggagctctc tgtacccaag gaaagtgcag ctgaaactca gacaagatta 100  
 caatgaacca actcaacttc ctgctgtttc tcatagcgac caccagagga 150  
 tggagtagag atgagctaa tacttaacttc aaggatgga cctgttcttc 200  
 gctccatct ctgcagaa cctgcaagga aatcaagac gaatttctta 250  
 gtgcatttga tggcctgtat ttctctcgca ctgaatgg tgttatctac 300  
 cagaccttct gtgacatgac ctctgggggt ggctctgga cctggtggc 350  
 caccatctat gggatgaa tggatgggaa atctctctga gggatagct 400  
 ggtccagtca ggaaggagat aaagcagact aaccagagg ggaaggcaac 450  
 tgggccaact acaacactt tggatctgca gaggcgcca agagcagatga 500

ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550  
 ggcacgtqcc caataagtcc cccatgcagc actggagaaa cagctccctg 600  
 cngaggtaac gcaaggacac tggcttctct cagacactgg gacataatct 650  
 gtttggcatc taccagaaat atccagtga atattggaga ggaagtgtt 700  
 ggaatgacaa cggcccggtg atccctgtgg tctatgattt tggcgacgcc 750  
 cagaaaaag catcttatta ctacccctat ggccagcggg aattcactgc 800  
 gggatttgtt cagttcaagg tattttaataa cgagajagca gccaacgctt 850  
 tgtgtgtcgg aatgagggtc accggatgta acaatjagca tcactgcatt 900  
 ggttgaggag gatactttcc agaggccagt cccagcagt gtggajattt 950  
 ttctggtttt gattggagtg gatattgga atctgttgg taaagcagca 1000  
 cccctjagat aactgagga cctctgtctt tattctatcg ttgagagttt 1050  
 tgtaggaggg aaccagacc tctctccca accatjagat cccaaggatg 1100  
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150  
 taatcatat tgactcaaga aaaaaa 1176

<110> 83  
 <110> 813  
 <110> EFT  
 <110> Homo Sapien

<100> 85  
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 Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Lys  
 20 25 30  
 Lys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys  
 35 40 45  
 Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr  
 50 55 60  
 Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly  
 65 70 75  
 Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met  
 80 85 90  
 Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly  
 95 100 105  
 Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr  
 110 115 120  
 Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys  
 125 130 135  
 Asn Pro Gly Tyr Tyr Asp Ile Gln Ala Lys Asp Leu Gly Ile Trp

140	145	150
His Val Pro Asn Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser	
155	160	165
Leu Leu Arg Tyr Arg Thr Asp Thr Gly Phe Leu Gln Thr Leu Gly		
170	175	180
His Asn Leu Phe Gly Ile Tyr Gln Lys Tyr Pro Val Lys Tyr Gly		
185	190	195
Glu Gly Lys Cys Trp Thr Asp Asn Gly Pro Val Ile Pro Val Val		
200	205	210
Tyr Asp Phe Gly Asp Ala Gln Lys Thr Ala Ser Tyr Tyr Ser Pro		
215	220	225
Tyr Gly Gln Arg Glu Phe Thr Ala Gly Phe Val Gln Phe Arg Val		
230	235	240
Phe Asn Asn Glu Arg Ala Ala Asn Ala Leu Cys Ala Gly Met Arg		
245	250	255
Val Thr Gly Cys Asn Thr Glu His His Cys Ile Gly Gly Gly Gly		
260	265	270
Tyr Phe Pro Glu Ala Ser Pro Gln Gln Cys Gly Asp Phe Ser Gly		
275	280	285
Phe Asp Trp Ser Gly Tyr Gly Thr His Val Gly Tyr Ser Ser Ser		
290	295	300
Arg Glu Ile Thr Ala Ala Val Leu Leu Phe Tyr Arg		
305	310	

<110> 89  
 <111> 759  
 <112> DNA  
 <113> Homo Sapien

<400> 80  
 ctgagatttgt cggcttgagg ggagacttca ggaatggctg tatctgaact 50  
 tccagcctca gagaccgacg cccttgctcc cgaggccat ggccggggtc 100  
 tccaggcttg tgcctctcgc ctctctgacg ctcttgccg atctggtggt 150  
 cgtcatcacc ttattctggt ccgggacag caacatacag gactgactgc 200  
 ctctcactgt caccctcgag gactatgaca agcaggacat tcagctgggtg 250  
 ggcggctct ctgtcactc ggccctcttt gcagtggagc tggccggttt 300  
 cctctcagga gctctcatgt tcaacagcac ccagagcctc atctcattg 350  
 gggtcactg tagtgcctcc gtggccctgt ccttcttcat attcgagcgt 400  
 tgggagtgca ctacgtattg gtacattttt gtctcttcca atgaccttc 450  
 agctgtact cactatctt ctctctctt ctctctctt ctctctctt 500  
 aaccctcttg attaccttca tgaagggaac ctaaggacga agcctacagg 550

ggcaagggcc gcttcgtatt cctggaagaa ggaaggcata ggcttcgggt 600  
 ttccccctgg aaactgcttc tgctggagga tatgtgttgg aataattaag 650  
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 tgtttttag taacattaag acctatatac agttttaggg gacaattaaa 750  
 aaaaaaaa 759

<210> 90  
 <211> 140  
 <212> PFT  
 <213> Homo Sapien

<400> 90  
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 Leu Ala His Leu Val Val Val Ile Thr Leu Phe Trp Ser Arg Asp  
 20 25 30  
 Ser Asn Ile Gln Ala Cys Leu Pro Leu Thr Phe Thr Pro Glu Glu  
 35 40 45  
 Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala Ala Leu Ser Val Thr  
 50 55 60  
 Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe Leu Ser Gly Val  
 65 70 75  
 Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile Gly Ala His  
 80 85 90  
 Lys Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu Arg Trp  
 95 100 105  
 Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala Leu  
 110 115 120  
 Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu  
 125 130 135  
 Lys Lys Lys Pro Phe  
 140

<210> 91  
 <211> 1371  
 <212> DNA  
 <213> Homo Sapien

<400> 91  
 cggggacccc gaaaagagaa ggggagagcg aggggacgag agcggaggag 50  
 gaagatgcaa ctgactcgct gctgcttcgt attctcgtg cagggtagcc 100  
 tctatctggg catctgtggc caggatgatg gtctctccgg ctccagaggac 150  
 cctggcgtg atgacagga gggcagccc gggcagga tgcctcggaa 200  
 gggggccac atctacata agtcccgccc catggcgaat tccactctcc 250  
 tagggctgt ccccccgcct ggggagctt ggggattct tgggcagccc 300

cccaaccgcc cgaaccacag cccccacccc tcagccaagg tgaagaaaat 350  
 ctttggtctg gggaacttct actccaaact caagacgttg gccctgaacc 400  
 tgcctgtcac agggaagatt gtggaccatg gcaatggjac cttcagcgtc 450  
 caattccaac acaatgccac agggccaggga aacatctcca tcagcctcgt 500  
 gcccccacgt aaagctgtag agttccacca ggaacagtag atcttcacgt 550  
 aagccaaagg ccacaaaaat ctcaactgac ggtatggatg ggaagaaggta 600  
 gaacgggacc gccggacctc gctttgcacc cctggaccag ccaagatctg 650  
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 aacctgaagg tgtggagtga ctgatcaca ggagcactg ajjaggagt 1050  
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 cgtctgtgt gtgtgtgtt ggttaattt aggggggg agttatgga 1800  
 aacgctgat tctgaactt tgtgtgaaga atcgttctt tggagcagga 1850

aataaaacttt gccccggggc a 1871

<210> 31

<211> 252

<212> PRT

<213> Homo Sapien

<400> 3

Met Gln Leu Thr Arg Cys Cys Phe Val Phe Leu Val Gln Gly Ser  
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Leu Tyr Leu Val Ile Cys Gly Gln Asp Asp Gly Pro Pro Gly Ser  
20 25 30

Glu Asp Pro Glu Arg Asp Asp His Glu Gly Gln Pro Arg Pro Arg  
35 40 45

Val Pro Arg Lys Arg Gly His Ile Ser Pro Lys Ser Arg Pro Met  
50 55 60

Ala Asn Ser Thr Leu Leu Gly Leu Leu Ala Pro Pro Gly Glu Ala  
65 70 75

Trp Gly Ile Leu Gly Gln Pro Pro Asn Arg Pro Asn His Ser Pro  
80 85 90

Pro Pro Ser Ala Lys Val Lys Lys Ile Phe Gly Trp Gly Asp Phe  
95 100 105

Tyr Ser Asn Ile Lys Thr Val Ala Leu Asn Leu Leu Val Thr Gly  
110 115 120

Lys Ile Val Asp His Gly Asn Gly Thr Phe Ser Val His Phe Gln  
125 130 135

His Asn Ala Thr Gly Gln Gly Asn Ile Ser Ile Ser Leu Val Pro  
140 145 150

Pro Ser Lys Ala Val Glu Phe His Gln Glu Gln Gln Ile Phe Ile  
155 160 165

Glu Ala Lys Ala Ser Lys Ile Phe Asn Cys Arg Met Glu Trp Glu  
170 175 180

Lys Val Glu Arg Gly Arg Arg Thr Ser Leu Cys Thr His Asp Pro  
185 190 195

Ala Lys Ile Cys Ser Arg Asp His Ala Glu Ser Ser Ala Thr Trp  
200 205 210

Ser Cys Ser Gln Pro Phe Lys Val Val Cys Val Tyr Ile Ala Phe  
215 220 225

Tyr Ser Thr Asp Tyr Arg Leu Val Gln Lys Val Cys Pro Asp Tyr  
230 235 240

Asn Tyr His Ser Asp Thr Pro Tyr Tyr Pro Ser Gly  
245 250

<210> 33

<211> 302

<212> DNA

<213> Homo Sapien

<400> 93

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 jggcctgggc tggcccttta tgtcttcacc atggccatcg agccgttgcg 100  
 tctctcttc ctcctggccg gacgtttctt ctgggtgggtg tctctactga 150  
 tttctgctct tgtttgggtc atggcaagag tcattattga caacaaagat 200  
 ggacaaacac agaaatatct gctgatcttt ggagcgtttg tctctgtcta 250  
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 ctgctggcct atgtctctgg ctggggcttt ggaatcatga gtggagtatt 400  
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 gctattatct tctgtcatgt attctggggc attgtatttc ttgctggctg 550  
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 tgggtgcagc ccagaccttc ataagttctt attatggaat aaacctggcg 650  
 tcagcattta taactctggt gctcatgggc acctgggcct tcttagctgc 700  
 gggagggcag tgcgaagcc tgaactctg cctgctctgc caagacaaga 750  
 actttctctt ttacaaccag cgtctcagat aacctcaggg aacctagcct 800  
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 tgaactccc tttttctggt ggaattgaga agaatatasa actatgcaga 900  
 aa +01

<310> 94

<211> 157

<212> PRT

<213> Homo Sapien

<400> 94

Met	Thr	Ala	Ala	Val	Phe	Phe	Gly	Cys	Ala	Phe	Ile	Ala	Phe	Gly
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Pro	Ala	Leu	Ala	Leu	Tyr	Val	Phe	Thr	Ile	Ala	Ile	Glu	Pro	Leu
				20				25						30
Arg	Ile	Ile	Phe	Leu	Ile	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser
				35				40						45
Leu	Leu	Ile	Ser	Ser	Leu	Val	Trp	Phe	Met	Ala	Arg	Val	Ile	Ile
				50				55						60
Asp	Asn	Lys	Asp	Gly	Phe	Thr	Gln	Leu	Thr	Leu	Leu	Ile	Phe	Gly
				65				70						75
Ala	Phe	Val	Ser	Val	Tyr	Ile	Gln	Glu	Met	Phe	Arg	Phe	Ala	Tyr
				80				85						90



Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Ser	Glu	Gly	Leu	Lys	Ser	Ile	Asn	
				95					100					105	
Pro	Gly	Glu	Thr	Ala	Pro	Ser	Met	Arg	Leu	Leu	Ala	Tyr	Val	Ser	
				110					115					120	
Gly	Leu	Gly	Phe	Gly	Ile	Met	Ser	Gly	Val	Phe	Ser	Phe	Val	Asn	
				125					130					135	
Thr	Leu	Ser	Asp	Ser	Leu	Gly	Pro	Gly	Thr	Val	Gly	Ile	His	Gly	
				140					145					150	
Asp	Ser	Pro	Gln	Phe	Phe	Leu	Tyr	Ser	Ala	Phe	Met	Thr	Leu	Val	
				155					160					165	
Ile	Ile	Leu	Leu	His	Val	Phe	Trp	Gly	Ile	Val	Phe	Phe	Asp	Gly	
				170					175					180	
Cys	Gln	Lys	Lys	Lys	Trp	Gly	Ile	Leu	Leu	Ile	Val	Leu	Leu	Thr	
				185					190					195	
His	Leu	Leu	Val	Ser	Ala	Gln	Thr	Phe	Ile	Ser	Ser	Tyr	Tyr	Gly	
				200					205					210	
Ile	Asn	Leu	Ala	Ser	Ala	Phe	Ile	Ile	Leu	Val	Leu	Met	Gly	Thr	
				215					220					225	
Trp	Ala	Phe	Leu	Ala	Ala	Gly	Gly	Ser	Cys	Arg	Ser	Leu	Lys	Leu	
				230					235					240	
Cys	Leu	Leu	Cys	Gln	Asp	Lys	Asn	Phe	Leu	Leu	Tyr	Asn	Gln	Arg	
				245					250					255	

Ser Arg

0120: 95  
 0141: 1073  
 0112: DNA  
 0113: Homo Sapien

0400: 95  
 aatttttcac cagagtaaac ttgagaaacc aactggacct tgagtattgt 50  
 acattttgdc tegtggccc aaaggtagca atctgaaaca tgaggagtac 100  
 gattctactg ttttctcttc taggatcaac tgggtcatta ccacagctca 150  
 aacctgcttt gggactccct cccacaaaac tgggtccgga tcaggggaaca 200  
 ctaccaaaac aacagcagtc aaatcaggtc tttctttctt taagtctgat 250  
 accattaaca cagatgctca cactgggggc agatctgcac ctgttaaata 300  
 ctgctgcagg aatgacacct ggtaccacaga cccaccatt gacctggga 350  
 gggttgaatg tacaacagca actgcaccca catgtgttac caatttttgt 400  
 cacacaactt ggagcccagg gcactatcct caggttcgag gaattgtatc 450  
 aaattctcac gagctcacc atccattcct tgttcccggg aggcattcctg 500

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 gcttcctaac tccagtggtc acagatgacg actttgcagt gaccaccct 650  
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 gattgagaca cattggatag tottagaaga aattaattct taatttacct 850  
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 aaaaaaaaaa aaaaaaaaaa aaa 1073

1101: 06  
 1111: 209  
 1121: 552  
 1131: Homo Sapien

1100: 36  
 Met Arg Ser Thr Ile Leu Leu Phe Cys Leu Leu Gly Ser Thr Arg  
 1 5 10 15  
 Ser Leu Pro Gln Leu Lys Pro Ala Leu Gly Leu Pro Pro Thr Lys  
 20 25 30  
 Leu Ala Pro Asp Gln Gly Thr Leu Pro Asn Gln Gln Gln Ser Asn  
 35 40 45  
 Gln Val Phe Pro Ser Leu Ser Leu Ile Pro Leu Thr Gln Met Leu  
 50 55 60  
 Thr Leu Gly Pro Asp Leu His Leu Leu Asn Pro Ala Ala Gly Met  
 65 70 75  
 Thr Pro Gly Thr Gln Thr His Pro Leu Thr Leu Gly Gly Leu Asn  
 80 85 90  
 Val Gln Gln Gln Leu His Pro His Val Leu Pro Ile Phe Val Thr  
 95 100 105  
 Gln Leu Gly Ala Gln Gly Thr Ile Leu Ser Ser Glu Glu Leu Pro  
 110 115 120  
 Gln Ile Phe Thr Ser Leu Ile Ile His Ser Leu Phe Pro Gly Gly  
 125 130 135  
 Ile Leu Pro Thr Ser Gln Ala Gly Ala Asn Pro Asp Val Gln Asp  
 140 145 150  
 Gly Ser Leu Pro Ala Gly Gly Ala Gly Val Asn Pro Ala Thr Gln  
 155 160 165

Gly	Thr	Pro	Ala	Gly	Arg	Leu	Pro	Thr	Pro	Ser	Gly	Thr	Asp	Asp
				170					175					180
Asp	Phe	Ala	Val	Thr	Thr	Pro	Ala	Gly	Ile	Gln	Arg	Ser	Thr	His
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Ala	Ile	Glu	Glu	Ala	Thr	Thr	Glu	Ser	Ala	Asn	Gly	Ile	Gln	
				200					205					

00100 - 37  
 00111 - 1348  
 00112 - 7NA  
 00113 - Homo Sapien

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02100 98  
02110 897  
02120 PET  
02130 Homo Sapien

0400 98  
Met Val Pro Ala Trp Leu Trp Leu Leu Cys Val Ser Val Pro Gln  
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Glu Asn Tyr Gly Gly Asn Phe Pro Leu Tyr Leu Thr Lys Leu Pro  
35 40 45  
Leu Pro Arg Glu Gly Ala Glu Gly Gln Ile Val Leu Ser Gly Asp  
50 55 60  
Ser Gly Lys Ala Thr Glu Gly Pro Phe Ala Met Asp Pro Asp Ser  
65 70  
Gly Phe Leu Leu Val Thr Arg Ala Leu Asp Arg Glu Glu Gln Ala  
75 80 85  
Glu Tyr Gln Leu Gln Val Thr Leu Glu Met Gln Asp Gly His Val  
90 95 100 105  
Leu Trp Gly Pro Gln Pro Val Leu Val His Val Lys Asp Glu Asn  
110 115 120  
Asp Gln Val Pro His Phe Ser Gln Ala Ile Tyr Arg Ala Arg Leu  
125 130 135  
Ser Arg Gly Thr Arg Pro Gly Ile Pro Ile Leu Phe Leu Glu Ala  
140 145 150  
Ser Asp Arg Asp Glu Pro Gly Thr Ala Asn Ser Asp Leu Arg Phe  
155 160 165  
His Ile Leu Ser Gln Ala Pro Ala Gln Pro Ser Pro Asp Met Phe  
170 175 180  
Gln Leu Glu Pro Arg Leu Gly Ala Leu Ala Leu Ser Pro Lys Gly  
185 190 195  
Ser Thr Ser Leu Asp His Ala Leu Glu Arg Thr Tyr Gln Leu Leu  
200 205 210  
Val Gln Val Lys Asp Met Gly Asp Gln Ala Ser Gly His Gln Ala  
215 220 225  
Thr Ala Thr Val Glu Val Ser Ile Ile Glu Ser Thr Trp Val Ser  
230 235 240  
Leu Glu Pro Ile His Leu Ala Glu Asn Leu Lys Val Leu Tyr Pro  
245 250 255  
His His Met Ala Gln Val His Trp Ser Gly Gly Asp Val His Tyr  
260 265 270

His Leu Glu Ser	His Pro Pro Gly Pro Phe Glu Val Asn Ala Glu	278	284	285
Gly Asn Leu Tyr	Val Thr Arg Glu Leu Asp Arg Glu Ala Gln Ala	290	295	300
Glu Tyr Leu Leu	Gln Val Arg Ala Gln Asn Ser His Gly Glu Asp	305	310	315
Tyr Ala Ala Pro	Leu Glu Leu His Val Leu Val Met Asp Glu Asn	320	325	330
Asp Asn Val Pro	Ile Cys Pro Pro Arg Asp Pro Thr Val Ser	335	340	345
Pro Glu Leu Ser	Pro Pro Gly Thr Glu Val Thr Arg Leu Ser Ala	350	355	360
Glu Asp Ala Asp	Ala Pro Gly Ser Pro Asn Ser His Val Val Tyr	365	370	375
Gln Leu Leu Ser	Pro Glu Pro Glu Asp Gly Val Glu Gly Arg Ala	380	385	390
Phe Gln Val Asp	Pro Thr Ser Gly Ser Val Thr Leu Gly Val Leu	395	400	405
Pro Leu Arg Ala	Gly Gln Asn Ile Leu Leu Leu Val Leu Ala Met	410	415	420
Asp Leu Ala Gly	Ala Glu Gly Gly Phe Ser Ser Thr Cys Glu Val	425	430	435
Glu Val Ala Val	Thr Asp Ile Asn Asp His Ala Pro Glu Phe	440	445	450
Thr Ser Gln Ile	Gly Pro Ile Ser Leu Pro Glu Asp Val Glu Pro	455	460	465
Gly Thr Leu Val	Ala Met Leu Thr Ala Ile Asp Ala Asp Leu	470	475	480
Pro Ala Phe Arg	Leu Met Asp Phe Ala Ile Glu Arg Gly Asp Thr	485	490	495
Glu Gly Thr Phe	Gly Leu Asp Trp Glu Pro Asp Ser Gly His Val	500	505	510
Arg Leu Arg Leu	Cys Lys Asn Leu Ser Tyr Glu Ala Ala Pro Ser	515	520	525
His Glu Val Val	Val Val Val Gln Ser Val Ala Lys Leu Val Gly	530	535	540
Pro Gly Pro Gly	Pro Gly Ala Thr Ala Thr Val Thr Val Leu Val	545	550	555
Glu Arg Val Met	Pro Pro Pro Lys Leu Asp Gln Glu Ser Tyr Glu	560	565	570
Ala Ser Val Pro	Ile Ser Ala Pro Ala Gly Ser Phe Leu Leu Thr	575	580	585

Ile	Gln	Pro	Ser	Asp	Pro	Ile	Ser	Arg	Thr	Leu	Arg	Phe	Ser	Leu	596	595	600
Val	Asn	Asp	Ser	Glu	Gly	Trp	Leu	Cys	Ile	Glu	Lys	Phe	Ser	Gly	605	610	615
Glu	Val	His	Thr	Ala	Gln	Ser	Leu	Gln	Gly	Ala	Gln	Pro	Gly	Asp	620	625	630
Thr	Tyr	Thr	Val	Leu	Val	Glu	Ala	Gln	Asp	Thr	Ala	Leu	Thr	Leu	635	640	645
Ala	Pro	Val	Pro	Ser	Gln	Tyr	Leu	Cys	Thr	Pro	Arg	Gln	Asp	His	650	655	660
Gly	Leu	Ile	Val	Ser	Gly	Pro	Ser	Lys	Asp	Pro	Asp	Leu	Ala	Ser	665	670	675
Gly	His	Gly	Pro	Tyr	Ser	Phe	Thr	Leu	Gly	Pro	Asn	Pro	Thr	Val	680	685	690
Gln	Arg	Asp	Trp	Arg	Leu	Gln	Thr	Leu	Asn	Gly	Ser	His	Ala	Tyr	695	700	705
Leu	Thr	Leu	Ala	Leu	His	Trp	Val	Glu	Pro	Arg	Glu	His	Ile	Ile	710	715	716
Pro	Val	Val	Val	Ser	His	Asn	Ala	Gln	Met	Trp	Gln	Leu	Leu	Val	720	730	735
Arg	Val	Ile	Val	Cys	Arg	Cys	Asn	Val	Glu	Gly	Gln	Cys	Met	Arg	740	745	750
Lys	Val	Gly	Arg	Met	Lys	Gly	Met	Pro	Thr	Lys	Leu	Ser	Ala	Val	755	760	765
Gly	Ile	Leu	Val	Gly	Thr	Leu	Val	Ala	Ile	Gly	Ile	Phe	Leu	Ile	770	775	780
Leu	Ile	Phe	Thr	His	Trp	Thr	Met	Ser	Arg	Lys	Lys	Asp	Pro	Asp	785	790	795
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<111> 2436

<112> DNA

<113> Homo Sapien

<100> 99

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aacccacgct cctggaagca ccagctcttta tctctttcacc ttcaagtccc 150

ctttctcaag aatctctctgt tctttgcoct ctacagtctt ggtacatcta 200

gaacccctcc ctcttgcttt ccaggcaaaa agagagagat ttaagctggt 250

aaaggaaaatg ttctctttat gtttggctta ctattgcatt tagaagctgc 300

aacaaattcc aatgagaacta gaactctctgc caacactgga tccagtgtga 250  
tctccagtgg agccagacaa gacaccaact ctgggtccag tgtgaacctc 400  
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CL10: 100

CL11: 596

CL12: PFT

CL13: Homo Sapien

CL60: 100

Met	Lys	Met	Gln	Lys	Gly	Asn	Val	Ile	Leu	Met	Phe	Gly	Leu	Leu
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Leu	His	Ile	Glu	Ala	Ala	Thr	Asn	Ser	Asn	Glu	Thr	Ser	Thr	Ser
				20					25					30
Ala	Asn	Thr	Gly	Ser	Ser	Val	Ile	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				35					40					45
Thr	Asn	Ser	Gly	Ser	Ser	Val	Thr	Ser	Ser	Gly	Val	Ser	Thr	Ala
				50					55					60
Thr	Ile	Ser	Gly	Ser	Ser	Val	Thr	Ser	Asn	Gly	Val	Ser	Ile	Val
				65					70					75
Thr	Asn	Ser	Glu	Phe	His	Thr	Thr	Ser	Ser	Gly	Ile	Ser	Thr	Ala
				80					85					90
Thr	Asn	Ser	Glu	Phe	Ser	Thr	Ala	Ser	Ser	Gly	Ile	Ser	Ile	Ala
				95					100					105
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				110					115					120
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Pro	Ser	Ser	Gly	Ala	Ser	Thr	Val
				125					130					135
Thr	Asn	Ser	Gly	Ser	Ser	Val	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				140					145					150
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Arg	Ala	Ser	Thr	Ala
				155					160					165
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Leu	Ser	Ser	Gly	Ala	Ser	Thr	Ala

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Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala	185	190	195
Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala	200	205	210
Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Arg Ala Ser Thr Ala	215	220	225
Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala	230	235	240
Thr Asn Ser Glu Ser Arg Thr Thr Ser Asn Gly Ala Gly Thr Ala	245	250	255
Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala	260	265	270
Thr Asn Ser Asp Ser Ser Thr Val Ser Ser Gly Ala Ser Thr Ala	275	280	285
Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala	290	295	300
Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala	305	310	315
Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Gly Ala Gly Thr Ala	320	325	330
Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Gly Ile Ser Thr Ala	335	340	345
Thr Asn Ser Glu Ser Ser Thr Pro Ser Ser Gly Ala Asn Thr Ala	350	355	360
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Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Val Ser Thr Ala	395	400	405
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Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Glu Ala Ser Thr Ala	425	430	435
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Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Asn Thr Ala	455	460	465
Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Ser Gly Thr Ala	470	475	480
Ala Leu Thr Gly Met His Thr Thr Ser His Ser Ala Ser Thr Ala			

485										490					495				
Val	Ser	Glu	Ala	Lys	Pro	Gly	Gly	Ser	Leu	Val	Pro	Trp	Glu	Ile					
				500					505					510					
Phe	Leu	Ile	Thr	Leu	Val	Ser	Val	Val	Ala	Ala	Val	Gly	Leu	Phe					
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Ala	Gly	Leu	Phe	Phe	Cys	Val	Arg	Asn	Ser	Leu	Ser	Leu	Arg	Asn					
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Thr	Phe	Asn	Thr	Ala	Val	Tyr	His	Pro	His	Gly	Leu	Asn	His	Gly					
				545					550					555					
Leu	Gly	Pro	Gly	Pro	Gly	Gly	Asn	His	Gly	Ala	Pro	His	Arg	Pro					
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Arg	Trp	Ser	Pro	Asn	Trp	Phe	Trp	Arg	Arg	Pro	Val	Ser	Ser	Ile					
				575					580					585					
Ala	Met	Glu	Met	Ser	Gly	Arg	Asn	Ser	Gly	Pro									
				590					595										

00100: 101  
 00110: 1728  
 00120: ENA  
 00130: Homo Sapien

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#10: 101  
#11: 414  
#12: PFI  
#13: Homo Sapien

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Met His Ser Arg Gly Arg Glu Ile Val Val Leu Leu Asn Pro Trp  
1 5 10 15  
Ser Ile Asn Glu Ala Val Ser Ser Tyr Cys Thr Tyr Phe Ile Lys  
20 25 30  
Gln Asp Ser Lys Ser Phe Gly Ile Met Val Ser Trp Lys Gly Ile  
35 40 45  
Tyr Phe Ile Leu Thr Leu Phe Trp Gly Ser Phe Phe Gly Ser Ile  
50 55 60  
Phe Met Leu Ser Pro Phe Leu Pro Leu Met Phe Val Asn Pro Ser  
65 70 75  
Trp Tyr Arg Trp Ile Asn Asn Arg Leu Val Ala Thr Trp Leu Thr  
80 85 90  
Leu Pro Val Ala Leu Leu Glu Thr Met Phe Gly Val Lys Val Ile  
95 100 105

Ile Thr Gly Asp	Ala Phe Val Pro Gly Glu Arg Ser Val Ile Ile	110	115	120
Met Asn His Arg	Thr Arg Met Asp Trp Met Phe Leu Trp Asn Cys	125	130	135
Leu Met Arg Tyr	Ser Tyr Leu Arg Leu Gln Lys Ile Cys Leu Lys	140	145	150
Ala Ser Leu Lys	Gly Val Pro Gly Phe Gly Trp Ala Met Gln Ala	155	160	165
Ala Ala Tyr Ile	Phe Ile His Arg Lys Trp Lys Asp Asp Lys Ser	170	175	180
His Phe Glu Asp	Met Ile Asp Tyr Phe Cys Asp Ile His Glu Pro	185	190	195
Leu Gln Leu Leu	Ile Phe Pro Glu Gly Thr Asp Leu Thr Glu Asn	200	205	210
Ser Lys Ser Arg	Ser Asn Ala Phe Ala Gln Lys Asn Gly Leu Gln	215	220	225
Lys Tyr Glu Tyr	Val Leu His Pro Arg Thr Thr Gly Phe Thr Phe	230	235	240
Val Val Asp Arg	Leu Arg Glu Gly Lys Asn Leu Asp Ala Val His	245	250	255
Asp Ile Thr Val	Ala Tyr Pro His Asn Ile Pro Gln Ser Glu Lys	260	265	270
His Leu Leu Gln	Gly Asp Phe Pro Arg Gln Ile His Phe His Val	275	280	285
His Arg Tyr Pro	Ile Asp Thr Leu Pro Thr Ser Lys Glu Asp Leu	290	295	300
Gln Leu Trp Cys	His Lys Arg Trp Glu Leu Lys Glu Glu Arg Leu	305	310	315
Arg Ser Phe Tyr	Gln Gly Glu Lys Asn Phe Tyr Phe Thr Gly Gln	320	325	330
Ser Val Ile Pro	Pro Cys Lys Ser Glu Leu Arg Val Leu Val Val	335	340	345
Lys Leu Leu Ser	Ile Leu Tyr Trp Thr Leu Phe Ser Pro Ala Met	350	355	360
Cys Leu Leu Ile	Tyr Leu Tyr Ser Leu Val Lys Trp Tyr Phe Ile	365	370	375
Ile Thr Ile Val	Ile Phe Val Leu Gln Leu Arg Ile Phe Gly Gly	380	385	390
Leu Glu Ile Ile	Glu Leu Ala Cys Tyr Arg Leu Leu His Lys Gln	395	400	405
Pro His Leu Asn	Ser Lys Lys Asn Glu	410		

0100 103  
0110 2403  
0110 DNA  
0110 Homo Sapien

0100 103  
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ttcatagtgt gagatcaacc caaggaata tccatggctt ttgtgctcat 150  
tttgggtctc agtttctacg agtggtgtc aggcagtggt caagtcactg 200  
gacggggcaa gtttgtccag gcttgggtg gggaggagcc cgtgttctcc 250  
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 gtaattcagc acattaataa agtaaaaaag aaaacataa aaaaaaaaaa 1730  
 aaa 2400

0100 104  
 0110 466  
 0120 PFT  
 0130 Homo Sapien

0000 104  
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 5 10 15  
 Ser Gly Gln Trp Gln Val Thr Gly Pro Gly Lys Phe Val Gln Ala  
 20 25 30  
 Leu Val Gly Glu Asp Ala Val Phe Ser Cys Ser Leu Phe Pro Glu  
 35 40 45  
 Thr Ser Ala Glu Ala Met Glu Val Arg Phe Phe Arg Asn Gln Phe  
 50 55 60  
 His Ala Val Val His Leu Tyr Arg Asp Gly Gln Asp Trp Glu Ser  
 65 70 75  
 Lys Gln Met Pro Gln Tyr Arg Gly Arg Thr Glu Phe Val His Asp

50	55	60
Ser Ile Ala Gly Gly Arg Val Ser Leu	Arg Leu Lys Asn Ile Thr	
95	100	105
Pro Ser Asp Ile Gly Leu Tyr Gly Cys	Trp Phe Ser Ser Gln Ile	
110	115	120
Tyr Asp Glu Glu Ala Thr Trp Glu Leu	Arg Val Ala Ala Leu Gly	
125	130	135
Ser Leu Pro Leu Ile Ser Ile Val Gly	Tyr Val Asp Gly Gly Ile	
140	145	150
Gln Leu Leu Cys Leu Ser Ser Gly Trp	Phe Pro Gln Pro Thr Ala	
155	160	165
Lys Trp Lys Gly Phe Gln Gly Gln Asp	Leu Ser Ser Asp Ser Arg	
170	175	180
Ala Asn Ala Asp Gly Tyr Ser Leu Tyr	Asp Val Glu Ile Ser Thr	
185	190	195
Ile Val Gln Glu Asn Ala Gly Ser Ile	Leu Cys Ser Ile His Leu	
200	205	210
Ala Glu Gln Ser His Glu Val Glu Ser	Lys Val Leu Ile Gly Gln	
215	220	225
Thr Phe Phe Gln Phe Ser Phe Trp Arg	Leu Ala Ser Ile Leu Leu	
230	235	240
Gly Leu Leu Cys Gly Ala Leu Cys Gly	Val Val Met Gly Met Ile	
245	250	255
Ile Val Phe Phe Lys Ser Lys Gly Lys	Ile Gln Ala Glu Leu Asp	
260	265	270
Trp Arg Arg Lys His Gly Gln Ala Glu	Leu Arg Asp Ala Arg Lys	
275	280	285
His Ala Val Glu Val Thr Leu Asp Pro	Glu Thr Ala His Pro Lys	
290	295	300
Leu Cys Val Ser Asp Leu Lys Thr Val	Thr His Arg Lys Ala Pro	
305	310	315
Gln Glu Val Pro His Ser Glu Lys Arg	Phe Thr Arg Lys Ser Val	
320	325	330
Val Ala Ser Gln Gly Phe Gln Ala Gly	Arg His Tyr Trp Glu Leu	
335	340	345
Asp Val Gly Gln Asn Val Gly Trp Tyr	Val Gly Val Cys Arg Asp	
350	355	360
Asp Val Asp Arg Gly Lys Asn Asn Val	Thr Leu Ser Pro Asn Asn	
365	370	375
Gly Tyr Trp Val Leu Arg Leu Thr Thr	Val His Leu Tyr Phe Thr	
380	385	390
Phe Asn Pro His Phe Ile Ser Leu Pro	Pro Ser Thr Pro Pro Thr	



295

400

105

Arg	Val	Gly	Val	Phe	Leu	Asp	Tyr	Glu	Gly	Gly	Thr	Ile	Ser	Phe
				410					415					420
Phe	Asn	Thr	Asn	Asp	Gln	Ser	Leu	Ile	Tyr	Thr	Leu	Leu	Thr	Cys
				425					430					435
Gln	Phe	Glu	Gly	Leu	Leu	Arg	Pro	Tyr	Ile	Gln	His	Ala	Met	Tyr
				440					445					450
Asp	Glu	Glu	Lys	Gly	Thr	Pro	Ile	Phe	Ile	Cys	Pro	Val	Ser	Pip
				455					460					465

Gly

42100: 105

42110: 2103

42110: DNA

42110: Homo Sapien

4400: 105

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 cca 2103

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 #L11: 4.3  
 #L1: PFI  
 #L1: Homo Sapien

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 35 40 45  
 Asn Gln Lys Lys Thr Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr  
 50 55 60

Thr	Asp	Lys	Leu	Tyr	Ala	Glu	Phe	Gly	Arg	Glu	Ala	Ser	Asn	Asn	
				65					79					75	
Phe	Thr	Glu	Met	Ser	Gln	Arg	Leu	Glu	Ser	Met	Val	Lys	Asn	Ala	
				80					85					90	
Phe	Tyr	Lys	Ser	Pro	Leu	Arg	Glu	Glu	Phe	Val	Lys	Ser	Gln	Val	
				95					100					105	
Ile	Lys	Phe	Ser	Gln	Gln	Lys	His	Gly	Val	Leu	Ala	His	Met	Leu	
				110					115					120	
Leu	Ile	Cys	Arg	Phe	His	Ser	Thr	Glu	Asp	Pro	Glu	Thr	Val	Asp	
				125					130					135	
Lys	Ile	Val	Gln	Leu	Val	Leu	His	Glu	Lys	Leu	Gln	Asp	Ala	Val	
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Gly	Pro	Pro	Lys	Val	Asp	Pro	His	Ser	Val	Lys	Ile	Lys	Lys	Ile	
				155					160					165	
Asn	Lys	Thr	Glu	Ser	Asp	Ser	Tyr	Leu	Asn	His	Cys	Cys	Gly	Thr	
				170					175					180	
Arg	Arg	Ser	Lys	Thr	Leu	Gly	Gln	Ser	Leu	Arg	Ile	Val	Gly	Gly	
				185					190					195	
Thr	Glu	Val	Glu	Gln	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Leu	Gln	
				200					205					210	
Trp	Asp	Gly	Ser	His	Arg	Cys	Gly	Ala	Thr	Leu	Ile	Asn	Ala	Thr	
				215					220					225	
Trp	Leu	Val	Ser	Ala	Ala	His	Cys	Phe	Thr	Thr	Tyr	Lys	Asn	Pro	
				230					235					240	
Ala	Arg	Trp	Thr	Ala	Ser	Phe	Gly	Val	Thr	Ile	Lys	Pro	Ser	Lys	
				245					250					255	
Met	Lys	Arg	Gly	Leu	Arg	Arg	Ile	Ile	Val	His	Glu	Lys	Tyr	Lys	
				260					265					270	
His	Pro	Ser	His	Asp	Tyr	Asp	Ile	Ser	Leu	Ala	Glu	Leu	Ser	Ser	
				275					280					285	
Pro	Val	Pro	Tyr	Thr	Asn	Ala	Val	His	Arg	Val	Cys	Leu	Pro	Asp	
				290					295					300	
Ala	Ser	Tyr	Glu	Phe	Gln	Pro	Gly	Asp	Thr	Met	Phe	Val	Thr	Gly	
				305					310					315	
Phe	Gly	Ala	Leu	Lys	Asn	Asp	Gly	Tyr	Ser	Gln	Asn	His	Leu	Arg	
				320					325					330	
Gln	Ala	Gln	Val	Thr	Leu	Ile	Asp	Ala	Thr	Thr	Cys	Asn	Glu	Pro	
				335					340					345	
Gln	Ala	Tyr	Asn	Thr	Ala	Ile	Thr	Pro	Arg	Met	Leu	Cys	Ala	Lys	
				350					355					360	
Ser	Leu	Glu	Gly	Lys	Thr	Asp	Ala	Cys	Gln	Gly	Asp	Ser	Gly	Gly	
				365					370					375	

Pro Leu Val Ser Ser Asp Ala Arg Asp Ile Trp Tyr Leu Ala Gly  
 380 385 390

Ile Val Ser Trp Gly Asp Glu Cys Ala Lys Pro Asn Lys Pro Gly  
 395 400 405

Val Tyr Thr Arg Val Thr Ala Leu Arg Asp Trp Ile Thr Ser Lys  
 410 415 420

Thr Gly Ile

(100) 107  
 (111) 1397  
 (112) DNA  
 (113) Homo Sapien

(100) 107  
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 cacagattat taaatttttt tacaagagta tagtatattt atttgaaatg 2300  
 ggaaaaagtgc attttaactgt attttgtgta ttttgtttat ttctcagaat 2350  
 atggaaaaga aattaaaatg tgtaataaaa tattttctag agagtaa 2397

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 <211> 305  
 <212> PRT  
 <213> Homo Sapien

<400> 108  
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 20 25 30

Val Ser Ala Trp Met Arg Asp Tyr Leu Asn Asn Val Leu Thr Leu  
35 40 45  
Thr Ala Glu Thr Arg Val Glu Glu Ala Val Ile Leu Thr Tyr Phe  
50 55 55  
Pro Val Val His Pro Val Met Ile Ala Val Cys Cys Phe Leu Ile  
60 65 70  
Ile Val Gly Met Leu Gly Tyr Cys Gly Thr Val Lys Arg Asn Leu  
80 85 90  
Leu Leu Leu Ala Trp Tyr Phe Gly Ser Leu Leu Val Ile Phe Cys  
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Val Glu Leu Ala Cys Gly Val Trp Thr Tyr Glu Gln Glu Leu Met  
110 115 120  
Val Pro Val Gln Trp Ser Asp Met Val Thr Leu Lys Ala Arg Met  
125 130 135  
Thr Asn Tyr Gly Leu Pro Arg Tyr Arg Trp Leu Thr His Ala Trp  
140 145 150  
Asn Phe Phe Gln Arg Glu Phe Lys Cys Cys Gly Val Val Tyr Phe  
155 160 165  
Thr Asp Trp Leu Glu Met Thr Glu Met Asp Trp Pro Pro Asp Ser  
170 175 180  
Cys Cys Val Arg Glu Phe Pro Gly Cys Ser Lys Gln Ala His Gln  
185 190 195  
Glu Asp Leu Ser Asp Leu Tyr Gln Glu Gly Cys Gly Lys Lys Met  
200 205 210  
Tyr Ser Phe Leu Arg Gly Thr Lys Gln Leu Gln Val Leu Arg Phe  
215 220 225  
Leu Gly Ile Ser Ile Gly Val Thr Gln Ile Leu Ala Met Ile Leu  
230 235 240  
Thr Ile Thr Leu Leu Trp Ala Leu Tyr Tyr Asp Arg Arg Glu Pro  
245 250 255  
Gly Thr Asp Gln Met Met Ser Leu Lys Asn Asp Asn Ser Gln His  
260 265 270  
Leu Ser Cys Pro Ser Val Glu Leu Leu Lys Pro Ser Leu Ser Arg  
275 280 285  
Ile Phe Glu His Thr Ser Met Ala Asn Ser Phe Asn Thr His Phe  
290 295 300  
Glu Met Glu Glu Leu  
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<210> 199

<211> 2339

<212> DNA

<213> Homo Sapien

<400> 109

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 aacagttact gaaattatga cttaaatac caatgactcc ttaaatatgt 2250  
 aaattatagt tataccttga aatttcaat caaatgcaga ctaattatag 2300  
 ggaatttggg agtctatcaa taaaacagta tataatttt 2339

c110: 110  
 c111: 145  
 c112: PPT  
 c113: Hemo Sapien

1400: 110  
 Met Pro Pro Phe Leu Leu Thr Cys Leu Phe Ile Thr Gly Ile  
 1 5 10 15  
 Ser Val Ser Pro Val Ala Leu Asp Pro Cys Ser Ala Tyr Ile Ser  
 20 25 30  
 Leu Asn Glu Pro Trp Arg Asn Thr Asp His Gln Leu Asp Glu Ser  
 35 40 45  
 Gln Gly Pro Pro Leu Cys Asp Asn His Val Asn Gly Glu Trp Tyr  
 50 55 60  
 His Phe Thr Gly Met Ala Gly Asp Ala Met Pro Thr Phe Cys Ile  
 65 70 75  
 Pro Glu Asn His Cys Gly Thr His Ala Pro Val Trp Leu Asn Gly  
 80 85 90  
 Ser His Pro Leu Glu Gly Asp Gly Ile Val Gln Arg Gln Ala Cys  
 95 100 105  
 Ala Ser Phe Asn Gly Asn Cys Cys Leu Trp Asn Thr His Val Glu  
 110 115 120  
 Val Lys Ala Cys Pro Gly Gly Tyr Tyr Val Tyr Arg Leu Thr Lys



125	130	135
Pro Ser Val Cys Phe His Val Tyr Cys Gly His Phe Tyr Asp Ile		
140	145	150
Cys Asp Glu Asp Cys His Gly Ser Cys Ser Asp Thr Ser Glu Tyr		
155	160	165
Thr Cys Ala Pro Gly Thr Val Leu Gly Pro Asp Arg Gln Thr Cys		
170	175	180
Phe Asp Glu Asn Glu Cys Glu Gln Asn Asn Gly Gly Cys Ser Glu		
185	190	195
Ile Cys Val Asn Leu Lys Asn Ser Tyr Arg Cys Glu Cys Gly Val		
200	205	210
Gly Arg Val Leu Arg Ser Asp Gly Lys Thr Cys Glu Asp Val Glu		
215	220	225
Gly Cys His Asn Asn Asn Gly Gly Cys Ser His Ser Cys Leu Tyr		
230	235	240
Ser Glu Lys Gly Tyr Gln Cys Glu Cys Pro Arg Gly Leu Val Leu		
245	250	255
Ser Glu Asp Asn His Thr Cys Gln Val Pro Val Leu Cys Lys Ser		
260	265	270
Asn Ala Ile Glu Val Asn Ile Pro Arg Glu Leu Val Gly Gly Leu		
275	280	285
Glu Leu Phe Leu Thr Asn Thr Ser Cys Arg Gly Val Ser Asn Gly		
290	295	300
Thr His Val Asn Ile Leu Phe Ser Leu Lys Thr Cys Gly Thr Val		
305	310	315
Val Asp Val Val Asn Asp Lys Ile Val Ala Ser Asn Leu Val Thr		
320	325	330
Gly Leu Pro Lys Gln Thr Pro Gly Ser Ser Gly Asp Phe Ile Ile		
335	340	345
Arg Thr Ser Lys Leu Leu Ile Pro Val Thr Cys Glu Phe Pro Arg		
350	355	360
Leu Tyr Thr Ile Ser Glu Gly Tyr Val Pro Asn Leu Arg Asn Ser		
365	370	375
Pro Leu Glu Ile Met Ser Arg Asn His Gly Ile Phe Pro Phe Thr		
380	385	390
Leu Glu Ile Phe Lys Asp Asn Glu Phe Glu Glu Pro Tyr Arg Glu		
395	400	405
Ala Leu Pro Thr Leu Lys Leu Arg Asp Ser Leu Tyr Phe Gly Ile		
410	415	420
Glu Pro Val Val His Val Ser Gly Leu Gln Ser Leu Val Glu Ser		
425	430	435
Cys Phe Ala Thr Pro Thr Ser Lys Ile Asp Glu Val Leu Lys Tyr		

446	445	456
Tyr Leu Ile Arg Asp Gly Cys Val Ser	Asp Asp Ser Val Lys Gln	
155	466	465
Tyr Thr Ser Arg Asp His Leu Ala Lys	His Phe Gln Val Pro Val	
470	475	480
Phe Lys Phe Val Gly Lys Asp His Lys	Glu Val Phe Leu His Cys	
485	490	495
Arg Val Leu Val Cys Gly Val Leu Asp	Glu Arg Ser Arg Cys Ala	
500	505	510
Gln Gly Cys His Arg Arg Met Arg Arg	Gly Ala Gly Gly Glu Asp	
515	520	525
Ser Ala Gly Leu Gln Gly Gln Thr Leu	Thr Gly Gly Pro Ile Arg	
530	535	540
Ile Asp Trp Glu Asp		
545		

42108 111  
 42110 2063  
 42120 DNA  
 42130 Homo Sapien

4409 111  
 jagagagca gcagcttgct cagcggacaa ggatgttggg cgtgaggcac 50  
 caagcctgc cctgcactcg ggcctcctcc agccagtgt gaccagggac 100  
 ctctgacctg ctggccagcc aggaacctgt tggggaggcc ctctgtctgc 150  
 ctgtgggtga caatctcagc ttcaggctac agggagaccg ggaggatcac 200  
 agagccagca tgttacagga tctgacagt gatcaacctc tgaacagcct 250  
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 cgggcagcct ctccacttca tcccgaggaa gcagctgtgt gacggagagc 450  
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(211) 112  
 (211) 132  
 (211) 187  
 (211) Homo Sapien

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 20 25 30

Lys Val Gly Ile Pro Ile Ile Ile Ala Leu Leu Ser Leu Ala Ser

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Ile Ile Ile Val Val Val Leu Ile Lys Val Ile Leu Asp Lys Tyr			
	55	55	60
Tyr Phe Leu Cys Gly Gln Pro Leu His Phe Ile Pro Arg Lys Gln			
	65	70	75
Leu Cys Asp Gly Glu Leu Asp Cys Pro Leu Gly Glu Asp Glu Glu			
	80	85	90
His Cys Val Lys Ser Phe Pro Glu Gly Pro Ala Val Ala Val Arg			
	95	100	105
Leu Ser Lys Asp Arg Ser Thr Leu Gln Val Leu Asp Ser Ala Thr			
	110	115	115
Gly Asn Trp Phe Ser Ala Cys Phe Asp Asn Phe Thr Glu Ala Leu			
	125	130	135
Ala Glu Thr Ala Cys Arg Gln Met Gly Thr Ser Arg Ala Val Glu			
	140	145	145
Ile Gly Pro Asp Gln Asp Leu Asp Val Val Glu Ile Thr Glu Asn			
	155	160	165
Ser Gln Glu Leu Arg Met Arg Asn Ser Ser Gly Pro Cys Leu Ser			
	170	175	180
Gly Ser Leu Val Ser Leu His Cys Leu Ala Cys Gly Lys Ser Leu			
	185	190	195
Lys Thr Pro Arg Val Val Gly Gly Glu Glu Ala Ser Val Asp Ser			
	200	205	210
Trp Pro Trp Gln Val Ser Ile Gln Tyr Asp Lys Gln His Val Lys			
	215	220	225
Gly Gly Ser Ile Leu Asp Pro His Trp Val Leu Thr Ala Ala His			
	230	235	240
Cys Phe Arg Lys His Thr Asp Val Phe Asn Trp Lys Val Arg Ala			
	245	250	255
Gly Ser Asp Lys Leu Gly Ser Phe Pro Ser Leu Ala Val Ala Lys			
	260	265	270
Ile Ile Ile Ile Glu Phe Asn Pro Met Tyr Pro Lys Asp Asn Asp			
	275	280	285
Ile Ala Leu Met Lys Leu Gln Phe Pro Leu Thr Phe Ser Gly Thr			
	290	295	300
Val Arg Pro Ile Lys Leu Pro Phe Phe Asp Glu Glu Leu Thr Pro			
	305	310	315
Ala Thr Pro Leu Trp Ile Ile Gly Trp Gly Phe Thr Lys Gln Asn			
	320	325	330
Gly Gly Lys Met Ser Asp Ile Leu Leu Ile Ala Ser Val Gln Val			
	335	340	345
Ile Asp Ser Thr Arg Cys Asn Ala Asp Asp Ala Tyr Gln Gly Glu			

350	355	360
Val Thr Glu Lys Met Met Cys Ala Gly	Ile Pro Glu Gly Gly Val	
365	370	375
Asp Thr Cys Gln Gly Asp Ser Gly Gly	Pro Leu Met Tyr Gln Ser	
380	385	390
Asp Gln Trp His Val Val Gly Ile Val	Ser Trp Gly Tyr Gly Cys	
395	400	405
Gly Gly Pro Ser Thr Pro Gly Val Tyr	Thr Lys Val Ser Ala Tyr	
410	415	420
Leu Asn Trp Ile Tyr Asn Val Trp Lys	Ala Glu Leu	
425	430	

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 <110> 1768  
 <120> DNA  
 <130> Homo Sapien

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 ctcttcagca actaataaag ccacaggagt tgaactgcta ggattctgac 150  
 tanyctgttg tggttagtgc tctactctt acctacatta aaatctgttt 200  
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 ctctctgttg accagtgcac tcaccaactg tctcactctt ggaggcaactg 400  
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 ctccctctct tccctctgag aggcctctct atgtccctac taaagccacc 1150  
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 taagaatrag ttattgcagg gtgtggtggc ctgtaatgcc aacattttgg 1500  
 gaagccgagg cgggttagac acctgaggtc aggagttcaa gaccagcttg 1550  
 gccaacatgg tgaacctct gtctctacta aaaatacaaa aaaactagcc 1600  
 aggcattggt gtgtgtgct gtatcccagc tactcgggag gctgagacag 1650  
 gagaattact tgaacctggg aggtgaagga ggctgagaca ggagaatcac 1700  
 ttcagcctga gcaacacagc gagactctgt ctcaaaaaaa ataaaaaaag 1750  
 aattatggtt atttgtaa 1768

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 <110> 109  
 <110> PFT  
 <110> Homo Sapien

110 > 114  
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 Val Phe Cys Ser Leu Val Thr Ser Leu Tyr Leu Pro Asn Thr Glu  
 20 25 30  
 Asp Leu Ser Leu Trp Leu Trp Pro Lys Pro Asp Leu His Ser Gly  
 35 40 45  
 Thr Arg Thr Glu Val Ser Thr His Thr Val Pro Ser Lys Pro Gly  
 50 55 60  
 Thr Ala Ser Pro Cys Trp Pro Leu Ala Gly Ala Val Pro Ser Pro  
 65 70 75  
 Thr Val Ser Arg Leu Glu Ala Leu Thr Arg Ala Val Gln Val Ala  
 80 85 90  
 Glu Pro Leu Gly Ser Cys Gly Phe Gln Gly Gly Pro Cys Pro Gly  
 95 100 105  
 Arg Arg Arg Asp

<210> 115

<118> 1197  
 <112> DNA  
 <113> Homo Sapien

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 ctaaatgcag aagcttttaa atccaagaaa atatgtaaat caottaagat 150  
 ctggggactg gtgttttgta tctggccct aactctaatt gtctgtttt 200  
 gggggagcaa gcactttctg cgggaggtac ccaaaaaagc ctatgacatg 250  
 gagcacactt tctacagcaa tggagagaag aagaagatct acatggaaat 300  
 tgatcctgtg accagaactg aaatatccag aagcggaaat ggcactgatg 350  
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 atgggtcttc aaaaatggtt tatcaaaact cagattaaag tgallcctga 450  
 attttctgaa ccagaagagg aaatagatga gaatgaagaa attaccacaa 500  
 ctttttttga acagtcagtg atttgggtcc cagcagaaaa gctattgaa 550  
 aaccagatt ttcttaaaaa ttccaaaatt ctggagatct gtgataacgt 600  
 gacatgtat tggatcaatc ccactctaatt atcagtttct gagttacaag 650  
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 tcatctgtgc tgtcatcag ccttgtaact ggtgggtggc ccgcatgctg 1000  
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 atataataaa tgcctgctat caaatgaatt tctgctatg aggcctctgg 1100  
 cccctggtag ccagctctcc agaattactt gtaggtaatt cctctcttca 1150  
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<110> 116  
 <111> 317  
 <112> PRT  
 <113> Homo Sapien

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 Asn Ala Glu Ala Phe Lys Ser Lys Lys Ile Cys Lys Ser Ile Lys

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35	40	45
Leu Phe Trp Gly Ser Lys His Phe Trp Pro Glu Val Pro Lys Lys		
50	55	60
Ala Tyr Asp Met Glu His Thr Phe Tyr Ser Asn Gly Glu Lys Lys		
65	70	75
Lys Ile Tyr Met Glu Ile Asp Pro Val Thr Arg Thr Glu Ile Phe		
80	85	90
Arg Ser Gly Asn Gly Thr Asp Glu Thr Leu Glu Val His Asp Phe		
95	100	105
Lys Asn Gly Tyr Thr Gly Ile Tyr Phe Val Gly Leu Gln Lys Cys		
110	115	120
Phe Ile Lys Thr Glu Ile Lys Val Ile Pro Glu Phe Ser Glu Pro		
125	130	135
Glu Glu Glu Ile Asp Glu Asn Glu Glu Ile Thr Thr Thr Phe Phe		
140	145	150
Glu Gln Ser Val Ile Trp Val Pro Ala Glu Lys Pro Ile Glu Asn		
155	160	165
Arg Asp Phe Leu Lys Asn Ser Lys Ile Leu Glu Ile Cys Asp Asn		
170	175	180
Val Thr Met Tyr Trp Ile Asn Pro Thr Leu Ile Ser Val Ser Glu		
185	190	195
Leu Gln Asp Phe Glu Glu Glu Gly Glu Asp Leu His Phe Pro Ala		
200	205	210
Asn Glu Lys Lys Gly Ile Glu Gln Asn Glu Gln Trp Val Val Pro		
215	220	225
Gln Val Lys Val Glu Lys Thr Arg His Ala Arg Gln Ala Ser Glu		
230	235	240
Glu Glu Leu Pro Ile Asn Asp Tyr Thr Glu Asn Gly Ile Glu Phe		
245	250	255
Asp Pro Met Leu Asp Glu Arg Gly Tyr Lys Cys Ile Tyr Cys Arg		
260	265	270
Arg Gly Asn Arg Thr Cys Arg Arg Val Lys Glu Pro Leu Leu Lys		
275	280	285
Tyr Tyr Pro Tyr Pro Tyr Cys Tyr Gln Gly Gly Arg Val Ile Cys		
290	295	300
Arg Val Ile Met Pro Cys Asn Trp Trp Val Ala Arg Met Leu Gly		
305	310	315
Arg Val		

<210> 117



0011: 2121  
0012: DNA  
0013: Homo Sapien

0400: 117

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 (2115) 261  
 (2120) PRT  
 (2130) Homo Sapien

(3490) 118  
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 Ala Ile Gly Leu Leu Val Ser Ile Phe Ala Leu Lys Cys Ile Arg 95  
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 110 115 120  
 Ser Gly Ile Met Phe Ile Val Ser Gly Leu Cys Ala Ile Ala Gly 125  
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 Val Ser Val Phe Ala Asn Met Leu Val Thr Asn Phe Trp Met Ser 140  
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Gln	Thr	Arg	Tyr	Thr	Phe	Gly	Ala	Ala	Leu	Phe	Val	Gly	Trp	Val
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Ala	Gly	Gly	Leu	Thr	Leu	Ile	Gly	Gly	Val	Met	Met	Cys	Ile	Ala
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Lys	Ala	Ser	Thr	Gly	Phe	Gly	Ser	Asn	Thr	Lys	Asn	Lys	Lys	Ile
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Tyr	Asp	Gly	Gly	Ala	Arg	Thr	Glu	Asp	Gln	Val	Gln	Ser	Tyr	Pro
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(210)- 119

(211)- 2010

(212)- DNA

(213)- Homo Sapien

(400)- 119

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Arg Val Ser Ala Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn

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Arg Met Gln Cys Lys Ile Tyr Asp Ser Leu Leu Ala Leu Ser Pro	65	70	75
Asp Leu Gln Ala Ala Arg Gly Leu Met Cys Ala Ala Ser Val Met	80	85	90
Ser Phe Leu Ala Phe Met Met Ala Ile Leu Gly Met Lys Cys Thr	95	100	105
Arg Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His Ile Leu Leu	110	115	120
Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val Leu Ile	125	130	135
Pro Val Ser Trp Val Ala Asn Ala Ile Ile Arg Asp Phe Tyr Asn	140	145	150
Ser Ile Val Asn Val Ala Gln Lys Arg Glu Leu Gly Glu Ala Leu	155	160	165
Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly Gly Ala	170	175	180
Leu Phe Cys Cys Val Phe Cys Cys Asn Glu Lys Ser Ser Ser Tyr	185	190	195
Arg Tyr Ser Ile Pro Ser His Arg Thr Thr Gln Lys Ser Tyr His	200	205	210
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 Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala  
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 Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro  
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 Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu  
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Ala	Leu	Arg	Val	Leu	Phe	Ser	Gly	Ser	Leu	Arg	Leu	Lys	Cys	Arg	
				140					145					150	
Asn	Ala	Cys	Cys	Gln	Arg	Trp	Tyr	Phe	Thr	Phe	Asn	Gly	Ala	Gln	
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Cys	Ser	Gly	Pro	Leu	Pro	Ile	Glu	Ala	Ile	Ile	Tyr	Leu	Asp	Gln	
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Gly	Ser	Pro	Glu	Met	Asn	Ser	Thr	Ile	Asn	Ile	His	Arg	Thr	Ser	
				185					190					195	
Ser	Val	Glu	Gly	Leu	Cys	Glu	Gly	Ile	Gly	Ala	Gly	Leu	Val	Asp	
				200					205					210	
Val	Ala	Ile	Trp	Val	Gly	Thr	Cys	Ser	Asp	Tyr	Pro	Lys	Gly	Asp	
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Ala	Ser	Thr	Gly	Trp	Asn	Ser	Val	Ser	Arg	Ile	Ile	Ile	Glu	Gln	
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Leu Pro Lys

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 CH10: 2379  
 CH10: ENA  
 CH10: Homo Sapien

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0110: 134  
0111: 513  
0112: PRT  
0113: Homo Sapien

0400: 134

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Ala	Gly	Cys	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	Ser	Leu	Gln	Lys	80	85	90	95
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Tyr	Leu	Asp	His	Asn	His	Ile	Ser	Asn	Ile	Asp	Glu	Asn	Ala	Phe	120	125	130	135
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Pro	Arg	Leu	Val	Thr	Leu	Gln	Asn	Leu	Tyr	Leu	Gln	Trp	Asn	Lys	300	305	310	315
Ile	Ser	Val	Ile	Gly	Gln	Thr	Met	Ser	Trp	Thr	Trp	Ser	Ser	Leu	320	325	330	335
Gln	Arg	Leu	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Ala	Phe	Ser	Gly	340	345	350	355

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 Cys Ser Arg Asn Ile Cys Ser Leu Val Asn Trp Leu Lys Ser Phe  
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 Lys Gly Leu Arg Glu Asn Thr Ile Ile Cys Ala Ser Pro Lys Glu  
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 Cys Gly Lys Ser Thr Thr Glu Arg Phe Asp Leu Ala Arg Ala Leu  
 365 370 375  
 Pro Lys Pro Thr Phe Lys Pro Lys Leu Pro Arg Pro Lys His Glu  
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 Ser Lys Pro Pro Leu Pro Pro Thr Val Gly Ala Thr Glu Pro Gly  
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 Pro Glu Thr Asp Ala Asp Ala Glu His Ile Ser Phe His Lys Ile  
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 ggaaaaagga aactggaagg aaaaccattg cgatttcgtg gtgtacatca 550  
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 cgacaatata atgactcag gtttatcaag tttatgttct ggactggtag 750  
 cttctattct gggaacacca gcgatgtca tcaaaagcag aataatgaat 800  
 caaccacgag ataaacaagg aaggggactt ttgtataaat catcgactga 850  
 ctgcttgatt caggtctgtc aagtggaagg attcatgagt ctatataaag 900  
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<10> 126

<11> 313

<117> PFT

<119> Homo Sapien

<100> 116

Met	Ser	Val	Pro	Glu	Glu	Glu	Arg	Leu	Leu	Pro	Leu	Thr	Gln
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Arg	Trp	Pro	Arg	Ala	Ser	Lys	Phe	Leu	Leu	Ser	Gly	Cys	Ala
				20				25					30
Thr	Val	Ala	Glu	Leu	Ala	Thr	Phe	Pro	Leu	Asp	Leu	Thr	Lys
				35				40					45
Arg	Leu	Gln	Met	Gly	Gly	Glu	Ala	Ala	Leu	Ala	Arg	Leu	Gly
				50				55					60
Gly	Ala	Arg	Glu	Ser	Ala	Pro	Tyr	Arg	Gly	Met	Val	Arg	Thr
				65				70					75
Leu	Gly	Ile	Ile	Glu	Glu	Glu	Gly	Phe	Leu	Lys	Leu	Trp	Glu
				80				85					90
Val	Thr	Pro	Ala	Ile	Tyr	Arg	His	Gln	Thr	Thr	Ser	Gly	Glu
				95				100					105
Met	Val	Thr	Tyr	Glu	His	Leu	Arg	Glu	Val	Val	Phe	Gly	Lys
				110				115					120

Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met	125	130	135
Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu	140	145	150
Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly	155	160	165
Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile	170	175	180
Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro	185	190	195
Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr	200	205	210
Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu	215	220	225
Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu	230	235	240
Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg	245	250	255
Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr	260	265	270
Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly	275	280	285
Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met	290	295	300
Thr Pro Trp Ser Thr Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg	305	310	315
Glu Met Ser Gly Val Ser Pro Phe	320		

4210: 127  
 4211: 1505  
 4212: DNA  
 4213: Homo Sapien

3400: 127  
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 cgtcagctcc tcgaccccg tgtcgggcta gtcagcgag gcggacgggc 100  
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 gcgctggtga cgggggctc ggggggcata ggcacggccg tggccggggc 200  
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<10: 128  
 <11: 250  
 <12: PRT  
 <13: Homo Sapien

<100: 128  
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 35 40 45

Gly Asn Ile Glu Glu Leu Ala Ala Glu Cys Lys Ser Ala Gly Tyr  
 50 65 80  
 Pro Gly Thr Leu Ile Pro Tyr Arg Cys Asp Leu Ser Asn Glu Glu  
 85 100 115  
 Asp Ile Leu Ser Met Phe Ser Ala Ile Arg Ser Gln His Ser Gly  
 120 135 150  
 Val Asp Ile Cys Ile Asn Asn Ala Gly Leu Ala Arg Pro Asp Thr  
 155 170 185  
 Leu Leu Ser Gly Ser Thr Ser Gly Trp Lys Asp Met Phe Asn Val  
 190 205 220  
 Asn Val Leu Ala Leu Ser Ile Cys Thr Arg Glu Ala Tyr Gln Ser  
 225 240 255  
 Met Lys Glu Arg Asn Val Asp Asp Gly His Ile Ile Asn Ile Asn  
 260 275 290  
 Ser Met Ser Gly His Arg Val Leu Pro Leu Ser Val Thr His Phe  
 295 310 325  
 Tyr Ser Ala Thr Lys Tyr Ala Val Thr Ala Leu Thr Glu Gly Leu  
 330 345 360  
 Arg Gln Glu Leu Arg Glu Ala Gln Thr His Ile Arg Ala Thr Cys  
 365 380 395  
 Ile Ser Pro Gly Val Val Glu Thr Gln Phe Ala Phe Lys Leu His  
 400 415 425  
 Asp Lys Asp Pro Gln Lys Ala Ala Ala Thr Tyr Glu Gln Met Lys  
 430 445 460  
 Cys Leu Lys Pro Gln Asp Val Ala Glu Ala Val Ile Tyr Val Leu  
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 Ser Thr Pro Ala His Ile Gln Ile Gly Asp Ile Gln Met Arg Pro  
 500 515 530  
 Thr Glu Gln Val Thr  
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(110): 129

(111): 1177

(112): DNA

(113): Homo Sapien

(400): 129

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 tcaggtgcag agtctcagtt gcccgaggc acctccctc ccgagggcagt 15'  
 ctgctcagag ggctcggc cagaattcca gttctggttt catgccagcc 20'  
 ctgctcagag ctggtctt tggggttc cagctggtt ttccggagg 25'  
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<210> 130

<211> 111

<212> P.F

<213> Homo Sapien

<200> 130

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Phe Arg Cys Arg Val Ser Val Ala Arg Glu His Leu Pro Ser Arg  
 35 40 45

Gly Ser Leu Leu Arg Gly Pro Arg Pro Arg Ile Pro Val Leu Val  
 50 55 60

Ser Cys Gln Pro Val Lys Gly His Gly Tyr Leu Gly Glu Ser Pro  
 65 70 75

Met Pro Phe Lys Arg Val Phe Cys Gln Asp Gly Asn Val Arg Ser  
 80 85 90

Phe Cys Val Cys Ala Val His Phe Ser Ser His Gln Pro Pro Val  
 95 100 105

Ala Val Glu Cys Leu Lys  
116

(210): 131  
(211): 2061  
(212): DNA  
(213): Homo Sapien

(400): 131  
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tgtgtcctctg cgaagccgggt ttcatttact gtaatgacgc cttctcagaa 200  
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gactatccac tatgattcac ttccaaaaat tccctatctg gaagaattac 450  
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<210> 132  
 <211> 649  
 <212> PPT  
 <213> Homo Sapien

<400> 132  
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 Cys Pro Ser Val Cys Arg Cys Asp Ala Gly Phe Ile Tyr Cys Asn  
 35 40 45  
 Asp Arg Phe Leu Thr Ser Ile Pro Thr Gly Ile Pro Glu Asp Ala  
 50 55 60  
 Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala Gly Ile  
 65 70 75  
 Pro Ser Asp Leu Lys Asn Leu Leu Lys Val Glu Arg Ile Tyr Leu  
 80 85 90  
 Tyr His Asn Ser Leu Asp Glu Phe Pro Thr Asn Leu Pro Lys Tyr  
 95 100 105  
 Val Lys Glu Leu His Leu Gln Glu Asn Asn Ile Arg Thr Ile Thr  
 110 115 120  
 Tyr Asp Ser Leu Ser Lys Ile Pro Tyr Leu Glu Glu Leu His Leu  
 125 130 135

Asp	Asp	Asn	Ser	Val	Ser	Ala	Val	Ser	Ile	Glu	Glu	Gly	Ala	Phe	
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Arg	Asp	Ser	Asn	Tyr	Leu	Arg	Leu	Leu	Phe	Leu	Ser	Arg	Asn	His	
				155					160					165	
Leu	Ser	Thr	Ile	Pro	Trp	Gly	Leu	Pro	Arg	Thr	Ile	Glu	Glu	Leu	
				170					175					180	
Arg	Leu	Asp	Asp	Asn	Arg	Ile	Ser	Thr	Ile	Ser	Ser	Pro	Ser	Leu	
				185					190					195	
Gln	Gly	Leu	Thr	Ser	Leu	Lys	Arg	Leu	Val	Leu	Asp	Gly	Asn	Leu	
				200					205					210	
Leu	Asn	Asn	His	Gly	Leu	Gly	Asp	Lys	Val	Phe	Phe	Asn	Leu	Val	
				215					220					225	
Asn	Leu	Thr	Gln	Leu	Ser	Leu	Val	Arg	Asn	Ser	Leu	Thr	Ala	Ala	
				230					235					240	
Pro	Val	Asn	Leu	Pro	Gly	Thr	Asn	Leu	Arg	Lys	Leu	Tyr	Leu	Gln	
				245					250					255	
Asp	Asn	His	Ile	Asn	Arg	Val	Pro	Pro	Asn	Ala	Phe	Ser	Tyr	Leu	
				260					265					270	
Arg	Gln	Leu	Tyr	Arg	Leu	Asp	Met	Ser	Asn	Asn	Asn	Leu	Ser	Asn	
				275					280					285	
Leu	Pro	Gln	Gly	Ile	Phe	Asp	Asp	Leu	Asp	Asn	Ile	Thr	Gln	Leu	
				290					295					300	
Ile	Leu	Arg	Asn	Asn	Pro	Trp	Tyr	Cys	Gly	Cys	Lys	Met	Lys	Trp	
				305					310					315	
Val	Arg	Asp	Trp	Leu	Gln	Ser	Leu	Pro	Val	Lys	Val	Asn	Val	Arg	
				320					325					330	
Gly	Leu	Met	Cys	Gln	Ala	Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile	
				335					340					345	
Lys	Asp	Leu	Asn	Ala	Glu	Leu	Phe	Asp	Cys	Lys	Asp	Ser	Gly	Ile	
				350					355					360	
Val	Ser	Thr	Ile	Gln	Ile	Thr	Thr	Ala	Ile	Pro	Asn	Thr	Val	Tyr	
				365					370					375	
Pro	Ala	Gln	Gly	Gln	Trp	Pro	Ala	Pro	Val	Thr	Lys	Gln	Pro	Asp	
				380					385					390	
Ile	Lys	Asn	Pro	Lys	Leu	Thr	Lys	Asp	Gln	Gln	Thr	Thr	Gly	Ser	
				395					400					405	
Pro	Ser	Arg	Lys	Thr	Ile	Thr	Ile	Thr	Val	Lys	Ser	Val	Thr	Ser	
				410					415					420	
Asp	Thr	Ile	His	Ile	Ser	Trp	Lys	Leu	Ala	Leu	Pro	Met	Thr	Ala	
				425					430					435	
Leu	Arg	Leu	Ser	Trp	Leu	Lys	Leu	Gly	His	Ser	Pro	Ala	Phe	Gly	
				440					445					450	

Ser	Ile	Thr	Glu	Thr	Ile	Val	Thr	Gly	Glu	Arg	Ser	Glu	Tyr	Leu
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Val	Thr	Ala	Leu	Glu	Pro	Asp	Ser	Pro	Tyr	Lys	Val	Cys	Met	Val
				470					475					480
Pro	Met	Glu	Thr	Ser	Asn	Leu	Tyr	Leu	Phe	Asp	Glu	Thr	Pro	Val
				485					490					495
Cys	Ile	Glu	Thr	Glu	Thr	Ala	Pro	Leu	Arg	Met	Tyr	Asn	Pro	Thr
				500					505					510
Thr	Thr	Leu	Asn	Arg	Glu	Gln	Glu	Lys	Glu	Pro	Tyr	Lys	Asn	Pro
				515					520					525
Asn	Leu	Pro	Leu	Ala	Ala	Ile	Ile	Gly	Gly	Ala	Val	Ala	Leu	Val
				530					535					540
Thr	Ile	Ala	Leu	Leu	Ala	Leu	Val	Cys	Tyr	Tyr	Val	His	Arg	Asn
				545					550					555
Gly	Ser	Leu	Phe	Ser	Arg	Asn	Cys	Ala	Tyr	Ser	Lys	Gly	Arg	Arg
				560					565					570
Arg	Lys	Asp	Asp	Tyr	Ala	Glu	Ala	Gly	Thr	Lys	Lys	Asp	Asn	Ser
				575					580					585
Ile	Leu	Glu	Ile	Arg	Glu	Thr	Ser	Phe	Gln	Met	Leu	Pro	Ile	Ser
				590					595					600
Asn	Glu	Pro	Ile	Ser	Lys	Glu	Glu	Phe	Val	Ile	His	Thr	Ile	Phe
				605					610					615
Pro	Pro	Asn	Gly	Met	Asn	Leu	Tyr	Lys	Asn	Asn	His	Ser	Glu	Ser
				620					625					630
Ser	Ser	Asn	Arg	Ser	Tyr	Arg	Asp	Ser	Gly	Ile	Pro	Asp	Ser	Asp
				635					640					645

His Ser His Ser

Cl10: 133

Cl11: 1882

Cl12: DNA

Cl13: Homo Sapien

Cl100: 133

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ggccagagct cagggtgtct agcgtgtgac cagcagtcag cagaggcccg 20'

ccatggccag cctggggctg ctgctcctgc tcttactgac agcactgcc 25'

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<210> 134  
 <211> 440

<212> PET

<213> Homo Sapien

<400> 134

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Thr	Ser	Ser	Glu	Gln	Arg	Pro	Ala	Met	Ala	Ser	Leu	Gly	Leu	Leu	
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Leu	Pro	Gly	Leu	Asp	Thr	Ala	Glu	Ser	Lys	Ala	Thr	Ile	Ala	Asp	
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Pro	Leu	Leu	Gln	Pro	Leu	Ser	Leu	Arg	Val	Gly	Met	Leu	Gly	Gln	
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Lys	Leu	Glu	Ala	Ala	Ile	Gln	Arg	Ser	Leu	His	Tyr	Leu	Lys	Leu	
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Leu	Val	Tyr	Pro	Thr	Phe	Gly	Pro	Gln	Asp	Ser	Phe	Ser	Glu	Gln	
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Arg	Ser	Asp	Val	Cys	Leu	Val	Gln	Leu	Leu	Gly	Thr	Gly	Thr	Asp	
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Ser	Ser	Glu	Pro	Cys	Gly	Leu	Ser	Asp	Leu	Cys	Arg	Ser	Leu	Met	
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Thr	Lys	Pro	Gly	Cys	Ser	Gly	Tyr	Cys	Leu	Ser	His	Gln	Leu	Leu	
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Phe	Phe	Leu	Trp	Ala	Arg	Met	Arg	Gly	Cys	Thr	Gln	Gly	Pro	Leu	
			245					250						255	
Gln	Gln	Ser	Gln	Asp	Tyr	Ile	Asn	Leu	Ile	Cys	Ala	Asn	Met	Met	
			260					265						270	
Asp	Leu	Asn	Ala	Ala	Ala	Gln	Ala	Ile	Ile	Tyr	Ala	Tyr	Pro	Thr	
			275					280						285	
Arg	Asp	Ile	Phe	Met	Glu	Asn	Ile	Met	Phe	Cys	Gly	Met	Gly	Gly	
			290					295						300	

Phe	Ser	Asp	Phe	Tyr	Lys	Leu	Arg	Trp	Leu	Glu	Ala	Ile	Leu	Ser
				305					310					315
Trp	Gln	Lys	Gln	Gln	Glu	Gly	Cys	Phe	Gly	Glu	Pro	Asp	Ala	Glu
				320					325					330
Asp	Glu	Glu	Leu	Ser	Lys	Ala	Ile	Gln	Tyr	Gln	Gln	His	Phe	Ser
				335					340					345
Arg	Arg	Val	Lys	Arg	Arg	Glu	Lys	Gln	Phe	Pro	Asp	Ser	Arg	Ser
				350					355					360
Val	Ala	Gln	Ala	Gly	Val	Gln	Trp	Arg	Asn	Leu	Gly	Ser	Leu	Gln
				365					370					375
Pro	Leu	Pro	Pro	Gly	Phe	Lys	Gln	Phe	Ser	Cys	Leu	Ile	Leu	Pro
				380					385					390
Ser	Ser	Trp	Asp	Tyr	Arg	Ser	Val	Pro	Pro	Tyr	Leu	Ala	Asn	Phe
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Tyr	Ile	Phe	Leu	Val	Glu	Thr	Gly	Phe	His	His	Val	Ala	His	Gln
				410					415					420
Gly	Leu	Glu	Leu	Leu	Ile	Ser	Arg	Asp	Pro	Pro	Thr	Ser	Gly	Ser
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Gln	Ser	Val	Gly	Leu										
				440										

<101> 135

<111> 384

<113> DNA

<113> Homo Sapien

<100> 135

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(C10): 136  
(C11): 242  
(C12): PRT  
(C13): Homo Sapien

(C40): 136  
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Ala Glu Gly Ser Gly Gly Ser Gly Val Gly Ile Gly Asp Arg Phe  
35 40 45  
Lys Ile Glu Gly Arg Ala Val Val Pro Gly Val Lys Pro Gln Asp  
50 55 60  
Trp Ile Ser Ala Ala Arg Val Leu Val Asp Gly Glu Glu His Val  
65 70 75  
Gly Phe Leu Lys Thr Asp Gly Ser Phe Val Val His Asp Ile Pro  
80 85 90  
Ser Gly Ser Tyr Val Val Glu Val Val Ser Pro Ala Tyr Arg Phe  
95 100 105  
Asp Phe Val Arg Val Asp Ile Thr Ser Lys Gly Lys Met Arg Ala  
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Arg Tyr Val Asn Tyr Ile Lys Thr Ser Glu Val Val Arg Leu Pro  
125 130 135  
Tyr Pro Leu Gln Met Lys Ser Ser Gly Pro Pro Ser Tyr Phe Ile  
140 145 150  
Lys Arg Glu Ser Thr Gly Trp Thr Asp Phe Leu Met Asn Pro Met  
155 160 165  
Val Met Met Met Val Leu Pro Leu Leu Ile Phe Val Leu Leu Pro  
170 175 180  
Lys Val Val Asn Thr Ser Asp Pro Asp Met Arg Arg Glu Met Glu  
185 190 195  
Gln Ser Met Asn Met Leu Asn Ser Asn His Glu Leu Pro Asp Val  
200 205 210  
Ser Val Pro Met Thr Arg Leu Phe Ser Ser Lys Ser Ser Gly Lys  
215 220 225  
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230 235 240

Arg Arg

0210: 137

0211: 1371

0212: DNA

0213: Homo Sapien

0400: 137

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C110: 108  
 C111: 201  
 C112: PFT  
 C113: Homo Sapien

C100: 108  
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 Ser Phe Ser Ile Tyr Ser Leu Gln Val Pro Ala Val Pro Gly Leu  
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 Thr Cys Trp Ala Leu Thr Ala Glu Pro Gly Trp Gly Gln Asn Lys  
 35 40 45  
 Gly Ala Thr Thr Cys Ala Thr Asn Ser His Ser Asp Ser Glu Leu  
 50 55 60  
 Arg Pro Glu Ile Phe Ser Ser Arg Glu Ala Trp Gln Phe Phe Leu  
 65 70 75  
 Leu Leu Trp Ser Pro Asp Phe Arg Pro Lys Met Lys Ala Ser Ser  
 80 85 90  
 Leu Ala Phe Ser Leu Leu Ser Ala Ala Phe Tyr Leu Leu Trp Thr  
 95 100 105  
 Pro Ser Thr Gly Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile  
 110 115 120  
 Ala Thr Asn Leu Gln Glu Ile Arg Asn Gly Phe Ser Glu Ile Arg  
 125 130 135  
 Gly Ser Val Gln Ala Lys Asp Gly Asn Ile Asp Ile Arg Ile Leu  
 140 145 150  
 Arg Arg Thr Glu Ser Leu Gln Asp Thr Lys Pro Ala Asn Arg Cys  
 155 160 165  
 Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe  
 170 175 180  
 Lys Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser  
 185 190 195  
 Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu  
 200 205 210  
 Ser His Ala His Met Thr Cys His Cys Tyr Ser Thr Ala Met Lys  
 215 220 225  
 Lys Tyr Ser Gln Ile Leu Ser His Phe Glu Lys Leu Glu Pro Gln

230

235

240

Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu Leu Gln  
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Trp Met Glu Glu Thr Glu  
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(210) 139

(211) 2395

(212) DNA

(213) Homo Sapien

(400) 139

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<10> 140

<11> 310

<12> PEF

<13> Homo Sapien

<100> 110

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				20					25					30

Pro	Val	Arg	Ser	Ser	Ala	Arg	Ala	Glu	His	Gly	Ala	Thr	Ser	Pro
				35					40					45

Ala	Pro	Glu	Pro	Ser	Ala	Gly	Ala	Ser	Ser	Asn	Trp	Thr	Thr	Leu
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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65	70	75
Leu Arg Asp Asp Phe Val Phe Gly Ser Lys Gly Val Lys Phe Met		
80	85	90
Pro Tyr Thr Thr Tyr Leu Val Glu Lys Gly Ala Ser His Ser Phe		
95	100	105
Val Ala Glu Ala Lys Pro Pro Thr Val Thr Met Pro Arg Ile Lys		
110	115	120
Ala Leu Met Thr Gly Ser Leu Pro Gly Phe Val Asp Val Ile Arg		
125	130	135
Asn Leu Asn Ser Pro Ala Leu Leu Glu Asp Ser Val Ile Arg Gln		
140	145	150
Ala Lys Ala Ala Gly Lys Arg Ile Val Phe Tyr Gly Asp Glu Thr		
155	160	165
Trp Val Lys Leu Phe Pro Lys His Phe Val Glu Tyr Asp Gly Thr		
170	175	180
Thr Ser Phe Phe Val Ser Asp Tyr Thr Glu Val Asp Asn Asn Val		
185	190	195
Thr Arg His Leu Asp Lys Val Leu Lys Arg Gly Asp Trp Asp Ile		
200	205	210
Leu Ile Leu His Tyr Leu Gly Leu Asp His Ile Gly His Ile Ser		
215	220	225
Gly Pro Asn Ser Pro Leu Ile Gly Gln Lys Leu Ser Gln Met Asp		
230	235	240
Ser Val Leu Met Lys Ile His Thr Ser Leu Gln Ser Lys Glu Arg		
245	250	255
Glu Thr Pro Leu Phe Asn Leu Leu Val Leu Cys Gly Asp His Gly		
260	265	270
Met Ser Glu Thr Gly Ser His Gly Ala Ser Ser Thr Glu Glu Val		
275	280	285
Asn Thr Pro Leu Ile Leu Ile Ser Ser Ala Phe Glu Arg Lys Pro		
290	295	300
Gly Asp Ile Arg His Pro Lys His Val Gln		
305	310	

<210> 141  
 <211> 754  
 <212> DNA  
 <213> Homo Sapien

<400> 141  
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 cact 754

01100-142  
 01110-193  
 01120-187  
 01130-Homo Sapien

01100-142  
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 Asn Pro Lys Lys Phe Ser Ile His Asp Gln Asp His Lys Val Leu  
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 Val Leu Asp Ser Gly Asn Leu Ile Ala Val Pro Asp Lys Asn Tyr  
 50 60  
 Ile Arg Pro Glu Leu Phe Phe Ala Leu Ala Ser Ser Leu Ser Ser  
 65 75  
 Ala Ser Ala Glu Lys Gly Ser Pro Ile Leu Leu Gly Val Ser Lys  
 80 90  
 Gly Glu Phe Cys Leu Tyr Cys Asp Lys Asp Lys Gly Gln Ser His  
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 Pro Ser Leu Gln Leu Lys Lys Glu Lys Leu Met Lys Leu Ala Ala  
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 Gln Lys Glu Ser Ala Arg Arg Pro Phe Ile Phe Tyr Arg Ala Gln  
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 Val Gly Ser Trp Asn Met Leu Glu Ser Ala Ala His Pro Gly Trp  
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Phe	Ile	Cys	Thr	Ser	Cys	Asn	Cys	Asn	Glu	Pro	Val	Gly	Val	Thr
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Asp	Lys	Phe	Glu	Asn	Arg	Lys	His	Ile	Glu	Phe	Ser	Phe	Gln	Pro
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Val	Cys	Lys	Ala	Glu	Met	Ser	Pro	Ser	Glu	Val	Ser	Asp		
				185					190					

<210> 143  
 <211> 361  
 <212> DNA  
 <213> Homo Sapien

<400> 143  
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 aaaaaaaaaa a 361

<210> 144  
 <211> 147  
 <212> PE  
 <213> Homo Sapien

<400> 144  
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Leu Leu Leu Leu Gly Ser Gln Ile Leu Leu Ile Tyr Ala Trp His	20	25	30
Phe His Glu Gln Arg Asp Cys Asp Glu His Asn Val Met Ala Arg	35	40	45
Pyr Leu Pro Ala Thr Val Glu Phe Ala Val His Thr Phe Asn Gln	50	55	60
Gln Ser Lys Asp Tyr Tyr Ala Tyr Arg Leu Gly His Ile Leu Asn	65	70	75
Ser Trp Lys Glu Gln Val Glu Ser Lys Thr Val Phe Ser Met Glu	80	85	90
Leu Leu Leu Gly Arg Thr Arg Cys Gly Lys Phe Glu Asp Asp Ile	95	100	105
Asp Asn Cys His Phe Gln Glu Ser Thr Glu Leu Asn Asn Thr Phe	110	115	120
Thr Cys Phe Phe Thr Ile Ser Thr Arg Pro Trp Met Thr Gln Phe	125	130	135
Ser Leu Leu Asn Lys Thr Cys Leu Glu Gly Phe His	140	145	

(110): 145

(111): 1157

(112): DNA

(113): Homo Sapien

(140): 145

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 gaatcaagtg gaaccggaag gcoctgccc gcactgccc gatcactjag 200  
 gcoaggtjg ctgagaaccg cccgggagcc ttcataaagc aaggccgcaa 250  
 gctgacatt gacttggag ccgagggcaa caggtactac gaggcgaact 300  
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 <111> 176  
 <112> FRF  
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<400> 146  
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 Leu Leu Phe Ser His Leu Ser Ala Val Gln Thr Arg Gly Ile Lys  
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 His Arg Ile Lys Trp Asn Arg Lys Ala Leu Pro Ser Thr Ala Gln  
 35 40 45  
 Ile Thr Glu Ala Gln Val Ala Glu Asn Arg Pro Gly Ala Phe Ile  
 50 55 60  
 Lys Gln Gly Arg Lys Leu Asp Ile Asp Phe Gly Ala Glu Gly Asn  
 65 70 75  
 Arg Tyr Tyr Glu Ala Asn Tyr Trp Gln Phe Pro Asp Gly Ile His  
 80 85 90  
 Tyr Asn Gly Cys Ser Glu Ala Asn Val Thr Lys Glu Ala Phe Val  
 95 100 105  
 Thr Gly Cys Ile Asn Ala Thr Gln Ala Ala Asn Gln Gly Glu Phe  
 110 115 120  
 Gln Lys Pro Asp Asn Lys Leu His Gln Gln Val Leu Trp Arg Leu  
 125 130 135  
 Val Gln Gln Leu Cys Ser Leu Lys His Cys Glu Phe Trp Leu Glu  
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 Arg Gly Ala Gly Leu Arg Val Thr Met His Gln Pro Val Leu Leu  
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 Cys Leu Leu Ala Leu Ile Trp Leu Met Val Lys  
 170 175

<210> 147



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 <111> Homo Sapien

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 cttagactt attctctctt ggctctctct ctgtctctctt tccctctctt 150  
 ctctatttt aattagtgc atctactcag agtcatgcaa gctggaaatc 200  
 tcttatctg ctgttcagtg gggtaggtca ctgagcttta gtttttattt 250  
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 ctgagcttat tgcctgatgc tgaggtttgg ggt 333

<110> 147  
 <111> 73  
 <12> EST  
 <111> Homo Sapien

<400> 148  
 Met Phe Arg Ser Ser Leu Leu Phe Trp Pro Pro Leu Cys Leu Leu  
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 Ser Leu Phe Leu Leu Ile Leu Ile Ser Ser Ile Tyr Ser Glu Ser  
 20 25 30  
 Tyr Lys Leu Glu Ile Phe His Phe Ala Cys Gln Trp Gly Arg Ser  
 35 40 45  
 Ser Ser Leu Ser Phe Tyr Phe Leu Lys Phe Gln Leu Ser Asp Ser  
 50 55 60  
 Tyr Gly Thr Cys Glu Gly Leu Phe Tyr Glu Tyr Ile Ala  
 65 70

<110> 149  
 <111> 1493  
 <11> DNA  
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 ccttcagtgt tcagagatcc tgcagccgac cagtcacggc cctctccccg 150  
 cctcacccc acctctcttg ctcttctgt ttttactctt ccttttcatt 200  
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 ccgagctgtg aaqaatggg ttctcggga ccggcacttg gattctggtg 300  
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 ttgctgaagc agaagagac aagattaaaa aaacatctcc tcagaaaaac 450

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ggcaataana gaaaaggaaa aaattgagaa agaaagacaa totataagaa 550  
gctccccact tgataataag ttgaatgtgg aagatgttga ttcaaccaag 600  
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aatgacagag cagtgtttga caagattggt totaaactac ttaatctcgg 800  
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aataagccca caagctggac tgagaatcag gctggaaaaa taacagagaa 950  
agtgaactca atggcagcaa ttcaagatcg tcttgcctcg ggagaaacg 1000  
atgaaacagt atctaacaca ttaaccttga caaatggctt ggaaaggaga 1050  
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catgaagaaa cagacagtac caaggaagaa ccagctaaqa tggaaagga 1400  
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gaaagacaga tgaacccaaa gjaaaaaacag aagcctatct ggaaagccatc 1500  
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cttatgttga gaaaggcatc ctggacaagg aagaagccga ggccatcaag 1650  
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accttttaca agtgggttaa acatagcttt cttcccgtaa aaactatctg 1850  
aaagttaagt tctatgtaag ctgaaaaaaa aaaaaaaaaa aaa 1893

<210> 110  
<211> 468  
<212> PBT  
<213> Homo Sapien

<400> 150

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				20					25					30
Leu	His	Asn	Arg	Glu	Leu	Ser	Ala	Glu	Asp	Pro	Leu	Asn	Glu	Gln
				35					40					45
Ile	Ala	Glu	Ala	Glu	Glu	Asp	Lys	Ile	Lys	Lys	Thr	Tyr	Pro	Phe
				50					55					60
Glu	Asn	Lys	Pro	Gly	Gln	Ser	Asn	Tyr	Ser	Phe	Val	Asp	Asn	Leu
				65					70					75
Asn	Leu	Leu	Lys	Ala	Ile	Thr	Glu	Lys	Glu	Lys	Ile	Glu	Lys	Gln
				80					85					90
Arg	Gln	Ser	Ile	Asp	Ser	Ser	Pro	Leu	Asp	Asn	Lys	Leu	Asn	Val
				95					100					105
Glu	Asp	Val	Asp	Ser	Thr	Lys	Asn	Arg	Lys	Leu	Ile	Asp	Asp	Tyr
				110					115					120
Asp	Ser	Thr	Lys	Ser	Gly	Leu	Asp	His	Lys	Phe	Gln	Asp	Asp	Phe
				125					130					135
Asp	Gly	Leu	His	Gln	Leu	Asp	Gly	Thr	Phe	Leu	Thr	Ala	Glu	Asp
				140					145					150
Ile	Val	His	Lys	Ile	Ala	Ala	Arg	Ile	Tyr	Glu	Glu	Asn	Asp	Arg
				155					160					165
Ala	Val	Phe	Asp	Lys	Ile	Val	Ser	Lys	Leu	Leu	Asn	Leu	Gly	Leu
				170					175					180
Ile	Thr	Glu	Ser	Gln	Ala	His	Thr	Leu	Glu	Asp	Glu	Val	Ala	Gln
				185					190					195
Val	Leu	Gln	Lys	Leu	Ile	Ser	Lys	Glu	Ala	Asn	Asn	Tyr	Glu	Glu
				200					205					210
Asp	Pro	Asn	Lys	Phe	Thr	Ser	Trp	Thr	Glu	Asn	Gln	Ala	Gly	Lys
				215					220					225
Ile	Pro	Glu	Lys	Val	Thr	Pro	Met	Ala	Ala	Ile	Gln	Asp	Gly	Leu
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Ala	Lys	Gly	Glu	Asn	Asp	Glu	Thr	Val	Ser	Asn	Thr	Leu	Thr	Leu
				245					250					255
Thr	Asn	Gly	Leu	Glu	Arg	Arg	Thr	Lys	Ser	Tyr	Ser	Glu	Asp	Asn
				260					265					270
Phe	Glu	Glu	Leu	Gln	Tyr	Phe	Pro	Asn	Phe	Tyr	Ala	Leu	Leu	Lys
				275					280					285
Ser	Ile	Asp	Ser	Glu	Lys	Glu	Ala	Lys	Val	Lys	Gln	Thr	Leu	Ile
				290					295					300
Thr	Ile	Met	Lys	Thr	Leu	Ile	Asp	Phe	Val	Lys	Met	Met	Val	Lys

	305	315	315
Tyr Gly Thr Ile Ser Pro Glu Glu Gly Val Ser Tyr Leu Glu Asn	320	325	330
Leu Asp Glu Met Ile Ala Leu Gln Thr Lys Asn Lys Leu Glu Lys	335	340	345
Asn Ala Thr Asp Asn Ile Ser Lys Leu Phe Pro Ala Pro Ser Glu	350	355	360
Lys Ser His Glu Glu Thr Asp Ser Thr Lys Glu Glu Ala Ala Lys	365	370	375
Met Glu Lys Glu Tyr Gly Ser Leu Lys Asp Ser Thr Lys Asp Asp	380	385	390
Asn Ser Asn Pro Gly Gly Lys Thr Asp Glu Pro Lys Gly Lys Thr	395	400	405
Glu Ala Tyr Leu Glu Ala Ile Arg Lys Asn Ile Glu Trp Leu Lys	410	415	420
Lys His Asp Lys Lys Gly Asn Lys Glu Asp Tyr Asp Leu Ser Lys	425	430	435
Met Arg Asp Phe Ile Asn Lys Gln Ala Asp Ala Tyr Val Glu Lys	440	445	450
Gly Ile Leu Asp Lys Glu Glu Ala Glu Ala Ile Lys Arg Ile Tyr	455	460	465
Ser Ser Leu			

0110> 151  
 0111> 2598  
 0112> DNA  
 0113> Homo Sapien

0400> 151  
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<210> 152

<211> 155

<212> EST

<213> Homo Sapien

<100> 152

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				20				25						30
Leu	His	Ala	Gly	Lys	Val	Ile	Lys	Gly	Gln	Glu	Ile	Ser	Val	Val
				35				40						45
Pro	Asn	Arg	Trp	Leu	Asp	Ala	Ser	Leu	Ser	Pro	Val	Ile	Leu	Gly
				50				55						60
Val	Gln	Gly	Gly	Ser	Gln	Cys	Leu	Ser	Cys	Gly	Val	Gly	Gln	Gln
				65				70						75
Pro	Thr	Leu	Thr	Leu	Glu	Pro	Val	Asn	Ile	Met	Glu	Leu	Tyr	Leu
				80				85						90
Gly	Ala	Lys	Glu	Ser	Lys	Ser	Phe	Thr	Phe	Tyr	Arg	Arg	Asp	Met
				95				100						105
Gly	Leu	Thr	Ser	Ser	Phe	Glu	Ser	Ala	Ala	Tyr	Pro	Gly	Trp	Phe
				110				115						120
Ile	Cys	Thr	Val	Pro	Glu	Ala	Asp	Gln	Pro	Val	Arg	Leu	Thr	Gln
				125				130						135
Leu	Pro	Glu	Asn	Gly	Gly	Trp	Asn	Ala	Pro	Ile	Thr	Asp	Phe	Tyr
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Phe	Gln	Gln	Cys	Asp										
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<210> 152

<211> 1152

<212> DNA

<213> Homo Sapien

<400> 153

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 cacccttgaa gaagtgcgtt tccctcaatc tgataggctc cagccttata 400  
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<110> 154

<111> 179

<112> PFT

<113> Homo Sapien

<110> 154

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				20					25				30	
Gly	Ala	Ala	Ala	Pro	Ile	Ser	Ser	His	Gly	Arg	Leu	Asp	Lys	Ser
				35					40				45	

Asn	Phe	Gln	Gln	Pro	Tyr	Ile	Thr	Asn	Arg	Thr	Phe	Met	Leu	Ala	
				50					55					60	
Lys	Glu	Ala	Ser	Leu	Ala	Asp	Asn	Asn	Thr	Asp	Val	Arg	Leu	Ile	
				65					70					75	
Gly	Glu	Lys	Leu	Phe	His	Gly	Val	Ser	Met	Ser	Glu	Arg	Cys	Tyr	
				80					85					90	
Leu	Met	Lys	Gln	Val	Leu	Asn	Phe	Thr	Leu	Glu	Glu	Val	Leu	Phe	
				95					100					105	
Pro	Gln	Ser	Asp	Arg	Phe	Gln	Pro	Tyr	Met	Gln	Glu	Val	Val	Pro	
				110					115					120	
Phe	Leu	Ala	Arg	Leu	Ser	Asn	Arg	Leu	Ser	Thr	Cys	His	Ile	Glu	
				125					130					135	
Gly	Asp	Asp	Leu	His	Ile	Gln	Arg	Asn	Val	Gln	Lys	Leu	Lys	Asp	
				140					145					150	
Thr	Val	Lys	Lys	Leu	Gly	Glu	Ser	Gly	Glu	Ile	Lys	Ala	Ile	Gly	
				155					160					165	
Glu	Leu	Asp	Leu	Leu	Phe	Met	Ser	Leu	Arg	Asn	Ala	Cys	Ile		
				170					175						

CL10: 155

CL11: 1320

CL12: DNA

CL13: Homo Sapien

CL10: 155

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agaagggcac ccccaagggc tactgcttg aggcaggct gtacgtgtt 750

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 ctttatttaa aatgaaaaaa 1320

C10 - 156  
 C11 - 177  
 C12 - PBT  
 C13 - Homo Sapien

C100 - 156  
 Met Arg Glu Arg Pro Arg Leu Gly Glu Asp Ser Ser Leu Ile Ser  
 1 5 10 15  
 Leu Phe Leu Gln Val Val Ala Phe Leu Ala Met Val Met Gly Thr  
 20 25 30  
 His Thr Tyr Ser His Trp Pro Ser Cys Cys Pro Ser Lys Gly Gln  
 35 40 45  
 Asp Thr Ser Glu Glu Leu Leu Arg Trp Ser Thr Val Pro Val Pro  
 50 55 60  
 Pro Leu Glu Pro Ala Arg Pro Asn Arg His Pro Glu Ser Cys Arg  
 65 70 75  
 Ala Ser Glu Asp Gly Pro Leu Asn Ser Arg Ala Ile Ser Pro Trp  
 80 85 90  
 Arg Tyr Glu Leu Asp Arg Asp Leu Asn Arg Leu Pro Gln Asp Leu  
 95 100 105  
 Tyr His Ala Arg Cys Leu Cys Pro His Cys Val Ser Leu Gln Thr  
 110 115 120  
 Gly Ser His Met Asp Pro Arg Gly Asn Ser Glu Leu Leu Tyr His  
 125 130 135  
 Asn Gln Ser Val Leu Tyr Arg Arg Trp Cys His Gly Glu Lys Gly  
 140 145 150  
 Thr His Lys Gly Tyr Cys Leu Glu Arg Arg Leu Tyr Arg Val Ser  
 155 160 165

Leu Ala Cys Val Cys Val Arg Pro Arg Val Met Gly  
 170 175

(210) 157  
 (211) 1510  
 (212) DNA  
 (213) Homo Sapien

(240) 157  
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 cgtaccacga gagccgacccg ttcaatgtgg ctctgaaact gggccatctc 100  
 cagagtggat gctacaacat gatctaates ccggagactt gagggacctc 150  
 cgaataaagc cgtttacaac tagtggttgc acaggggact attcaatttt 200  
 gatgaangta agctgggtac tccgggcaga tgcacgcata cgttggttga 250  
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 tgtgtgaggt gcaattacac agaggccttc cagactcaga ccagacccctc 350  
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 cataatgaaa tataaaaaaa agtgtgtcaa ggcgggaagc ctgtgggata 550  
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 taccatcggg tctctcagg tgtttgagcc acaccagaag aaacaaacgc 700  
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gtaccacetc atgaaggatg ccactgcttt ctgtgagaa cttctccatg 1450  
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(210) 158

(211) 502

(212) PER

(213) Homo Sapien

(400) 158

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Val Pro Arg Glu Phe Thr Val Gln Cys Gly Ser Glu Thr Gly Pro  
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Ser Pro Glu Trp Met Leu Gln His Asp Leu Ile Pro Gly Asp Leu  
31 41 41

Arg Asp Leu Arg Val Glu Pro Val Thr Thr Ser Val Ala Thr Gly  
51 51 61

Asp Tyr Ser Ile Leu Met Asn Val Ser Trp Val Leu Arg Ala Asp  
61 71 71

Ala Ser Ile Arg Leu Leu Lys Ala Thr Lys Ile Cys Val Thr Gly  
81 81 91

Lys Ser Asn Phe Gln Ser Tyr Ser Cys Val Arg Cys Asn Tyr Thr  
101 101 101

Glu Ala Phe Gln Phe Gln Thr Arg Pro Ser Gly Gly Lys Trp Thr  
111 111 121

Phe Ser Tyr Ile Gly Phe Pro Val Glu Leu Asn Thr Val Tyr Phe  
121 131 131

Ile Gly Ala His Asn Ile Pro Asn Ala Asn Met Asn Glu Asp Gly  
141 141 151

Pro Ser Met Ser Val Asn Phe Thr Ser Pro Gly Cys Leu Asp His  
161 161 161

Ile Met Lys Tyr Lys Lys Lys Cys Val Lys Ala Gly Ser Leu Trp  
171 171 181

Asp Pro Asn Ile Thr Ala Cys Lys Lys Asn Glu Glu Thr Val Glu  
181 191 191

Val Asn Phe Thr Thr Thr Pro Leu Gly Asn Arg Tyr Met Ala Leu  
201 201 211

Ile Gln His Ser Thr Ile Ile Gly Phe Ser Gln Val Phe Glu Pro  
221 221 231

His Gln Lys Lys Gln Thr Arg Ala Ser Val Val Ile Pro Val Thr  
231 231 241

Gly Asp Ser Glu Gly Ala Thr Val Gln Leu Thr Pro Tyr Phe Pro	245	250	255
Thr Cys Gly Ser Asp Cys Ile Arg His Lys Gly Thr Val Val Leu	260	265	270
Cys Pro Gln Thr Gly Val Pro Phe Pro Leu Asp Asn Asn Lys Ser	275	280	285
Lys Pro Gly Gly Thr Leu Pro Leu Leu Leu Leu Ser Leu Leu Val	290	295	300
Ala Thr Trp Val Leu Val Ala Gly Ile Tyr Leu Met Trp Arg His	305	310	315
Glu Arg Ile Lys Lys Thr Ser Phe Ser Thr Thr Thr Leu Leu Pro	320	325	330
Pro Ile Lys Val Leu Val Val Tyr Pro Ser Glu Ile Cys Phe His	335	340	345
His Thr Ile Cys Tyr Phe Thr Glu Phe Leu Gln Asn His Cys Arg	350	355	360
Ser Glu Val Ile Leu Glu Lys Trp Gln Lys Lys Lys Ile Ala Glu	365	370	375
Met Gly Pro Val Gln Trp Leu Ala Thr Gln Lys Lys Ala Ala Asp	380	385	390
Lys Val Val Phe Leu Leu Ser Asn Asp Val Asn Ser Val Cys Asp	395	400	405
Gly Thr Cys Gly Lys Ser Glu Gly Ser Trp Ser Glu Asn Ser His	410	415	420
Asp Leu Phe Pro Leu Ala Phe Asn Leu Ile Cys Ser Asp Leu Arg	425	430	435
Ser Gln Ile His Leu His Lys Tyr Val Val Val Tyr Phe Arg His	440	445	450
Ile Asp Thr Lys Asp Asp Tyr Asn Ala Leu Ser Val Lys Pro Lys	455	460	465
Tyr His Leu Met Lys Asp Ala Thr Ala Phe Cys Ala Glu Leu Leu	470	475	480
His Val Lys Gln His Val Ser Ala Gly Lys Arg Ser Gln Ala Cys	485	490	495
His Asp Gly Cys Lys Ser Leu	500		

<10> 159  
 <11> 535  
 <12> DNA  
 <213> Homo Sapien

<400> 159  
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cagctcggaa aatccccaaa gtaggacata cttttttcca aaagcctgag 150  
 agttgcgcgc ctgtgcacgg aggtagtatg aagcttgaca ttggcaccat 200  
 caatgaaaaa cagcgcggtt ccatgtcacg taacatcgag agccgctcca 250  
 cctcccccctg gaattacaat gtcacctggg accccaacgg gtacccctcg 300  
 gaagttttac aggcccaqrg taggaacttg ggcctgcacca atgctcaagg 350  
 aaaggaagac atctccatga attccgttcc caccagcaa gagaccctgg 400  
 tctgcacgag gaagcaccaa ggcctgctct tttctttcca gttggagaag 450  
 gtgctggtga ctgttgcccg cactcgctc acccctgtca tccaccatgt 500  
 gcaqtaagag gtgcataacc actcagctga agaag 535

<210> 1c0

<211> 1c3

<212> 1c7

<213> Homo Sapien

<400> 1c0

Met	Thr	Val	Lys	Thr	Leu	His	Gly	Pro	Ala	Met	Val	Lys	Tyr	Leu
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Leu	Leu	Ser	Ile	Leu	Gly	Leu	Ala	Ile	Leu	Ser	Glu	Ala	Ala	Ala
			20					25					30	
Arg	Lys	Ile	Pro	Lys	Val	Gly	His	Thr	Phe	Phe	Gln	Lys	Pro	Glu
			35					40					45	
Ser	Cys	Pro	Pro	Val	Pro	Gly	Gly	Ser	Met	Lys	Leu	Asp	Ile	Gly
			50					55					60	
Ile	Ile	Asn	Glu	Asn	Gln	Arg	Val	Ser	Met	Ser	Arg	Asn	Ile	Gln
			65					70					75	
Ser	Arg	Ser	Thr	Ser	Pro	Trp	Asn	Tyr	Thr	Val	Thr	Trp	Asp	Pro
			80					85					90	
Asn	Arg	Tyr	Pro	Ser	Glu	Val	Val	Gln	Ala	Gln	Cys	Arg	Asn	Leu
			95					100					105	
Gly	Cys	Ile	Asn	Ala	Gln	Gly	Lys	Glu	Asp	Ile	Ser	Met	Asn	Ser
			110					115					120	
Val	Pro	Ile	Gln	Gln	Glu	Thr	Leu	Val	Val	Arg	Arg	Lys	His	Gln
			125					130					135	
Gly	Cys	Ser	Val	Ser	Phe	Gln	Leu	Glu	Lys	Val	Leu	Val	Thr	Val
			140					145					150	
Gly	Cys	Thr	Cys	Val	Thr	Pro	Val	Ile	His	His	Val	Gln		
			155					160						

<214> 1c7

<215> 2380

<212> DNA

<213> Homo Sapien

<400> 161

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cacjggctga ctggggtgct tgcacccctt gggggggggg agcacaggc 200  
ctcaggctcg ggtgcacact ggcacctaga agatgcctgt gccttggttc 250  
ttjctgtcct tggcactggg ccgaagccca gtggctcttt ctctggagag 300  
gcttgctggg cctcaggag ctaccactg ctctccgggc ctctcctgc 350  
gcctctggga cagtaacata ctctgcctgc ctggggacat cgtgcctgt 400  
ccgggcctcg tgcjggcgcc tacgcacctg cagacagagc tggctctgag 450  
gtgcacagaag gagaagact gtgacctctg tctgcctgtg gctgtccact 500  
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 ccgcgttcgg ggcggctcca agagagagcg gagcaagtgt cccggggcct 2250  
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 ataaagacag acgtgtttt tctaaaaaaa 2380

GI10: 167  
 GI11: 738  
 GI11: PFT  
 GI12: Homo Sapien

GI00: 1e2  
 Met Pro Val Pro Trp Phe Leu Leu Ser Leu Ala Leu Gly Arg Ser  
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 Pro Val Val Leu Ser Leu Glu Arg Leu Val Gly Pro Gln Asp Ala  
 20 25 30  
 Thr His Cys Ser Pro Gly Leu Ser Cys Arg Leu Trp Asp Ser Asp  
 35 40 45  
 Ile Leu Cys Leu Pro Gly Asp Ile Val Pro Ala Pro Gly Pro Val  
 50 55 60  
 Leu Ala Pro Thr His Leu Gln Thr Glu Leu Val Leu Arg Cys Gln  
 65 70 75  
 Lys Glu Thr Asp Cys Asp Leu Cys Leu Arg Val Ala Val His Leu  
 80 85 90  
 Arg Val His Gly His Trp Glu Glu Thr Thr Asp Gln Glu Lys Thr  
 95 100 105  
 Gly Gly Ala Ala Asp Ser Gly Val Glu Glu Pro Arg Asn Ala Ser  
 110 115 120

Leu Gln Ala Gln Val Val Leu Ser Phe Gln Ala Tyr Pro Thr Ala	135
135	
Arg Cys Val Leu Leu Glu Val Gln Val Pro Ala Ala Leu Val Gln	150
145	
Phe Gly Gln Ser Val Gly Ser Val Val Tyr Asp Cys Phe Glu Ala	165
160	
Ala Leu Gly Ser Glu Val Arg Ile Trp Ser Tyr Thr Gln Pro Arg	180
175	
Tyr Glu Lys Glu Leu Asn His Thr Gln Gln Leu Pro Ala Leu Pro	195
190	
Trp Leu Asn Val Ser Ala Asp Gly Asp Asn Val His Leu Val Leu	210
205	
Asn Val Ser Glu Glu Gln His Phe Gly Leu Ser Leu Tyr Trp Asn	225
220	
Gln Val Gln Gly Pro Pro Lys Pro Arg Trp His Lys Asn Leu Thr	240
235	
Gly Pro Gln Ile Ile Thr Leu Asn His Thr Asp Leu Val Pro Cys	255
250	
Leu Cys Ile Gln Val Trp Pro Leu Glu Pro Asp Ser Val Arg Thr	270
265	
Asn Ile Cys Pro Phe Arg Glu Asp Pro Arg Ala His Gln Asn Leu	285
280	
Trp Gln Ala Ala Arg Leu Arg Leu Leu Thr Leu Gln Ser Trp Leu	300
295	
Leu Asp Ala Pro Cys Ser Leu Pro Ala Gln Ala Ala Leu Cys Trp	315
310	
Arg Ala Pro Gly Gly Asp Pro Cys Gln Pro Leu Val Pro Pro Leu	330
325	
Ser Trp Glu Asn Val Thr Val Asp Lys Val Leu Glu Phe Pro Leu	345
340	
Leu Lys Gly His Pro Asn Leu Cys Val Gln Val Asn Ser Ser Glu	360
355	
Lys Leu Gln Leu Gln Glu Cys Leu Trp Ala Asp Ser Leu Gly Pro	375
370	
Leu Lys Asp Asp Val Leu Leu Leu Glu Thr Arg Gly Pro Gln Asp	390
385	
Asn Arg Ser Leu Cys Ala Leu Glu Pro Ser Gly Cys Thr Ser Leu	405
395	
Pro Ser Lys Ala Ser Thr Arg Ala Ala Ala Leu Glu Gly Gln Tyr Leu	420
415	
Leu Gln Asp Leu Gln Ser Gly Gln Cys Leu Gln Leu Trp Asp Asp	435
425	



Asp	Leu	Gly	Ala	Leu	Trp	Ala	Cys	Pro	Met	Asp	Lys	Tyr	Ile	His
				440					445					450
Lys	Arg	Trp	Ala	Leu	Val	Trp	Leu	Ala	Cys	Leu	Leu	Phe	Ala	Ala
				455					460					465
Ala	Leu	Ser	Leu	Ile	Leu	Leu	Leu	Lys	Lys	Asp	His	Ala	Lys	Gly
				470					475					480
Trp	Leu	Arg	Leu	Leu	Lys	Gln	Asp	Val	Arg	Ser	Gly	Ala	Ala	Ala
				485					490					495
Arg	Gly	Arg	Ala	Ala	Leu	Leu	Leu	Tyr	Ser	Ala	Asp	Asp	Ser	Gly
				500					505					510
Phe	Glu	Arg	Leu	Val	Gly	Ala	Leu	Ala	Ser	Ala	Leu	Cys	Gln	Leu
				515					520					525
Pro	Leu	Arg	Val	Ala	Val	Asp	Leu	Trp	Ser	Arg	Arg	Glu	Leu	Ser
				530					535					540
Ala	Gln	Gly	Pro	Val	Ala	Trp	Phe	His	Ala	Gln	Arg	Arg	Gln	Ser
				545					550					555
Leu	Gln	Glu	Gly	Gly	Val	Val	Val	Leu	Leu	Phe	Ser	Pro	Gly	Ala
				560					565					570
Val	Ala	Leu	Cys	Ser	Glu	Trp	Leu	Gln	Asp	Gly	Val	Ser	Gly	Pro
				575					580					585
Gly	Ala	His	Gly	Pro	His	Asp	Ala	Phe	Arg	Ala	Ser	Leu	Ser	Cys
				590					595					600
Val	Leu	Pro	Asp	Phe	Leu	Gln	Gly	Arg	Ala	Pro	Gly	Ser	Tyr	Val
				605					610					615
Gly	Ala	Cys	Phe	Asp	Arg	Leu	Leu	His	Pro	Asp	Ala	Val	Pro	Ala
				620					625					630
Ileu	Phe	Arg	Thr	Val	Pro	Val	Phe	Thr	Leu	Pro	Ser	Gln	Leu	Pro
				635					640					645
Asp	Phe	Leu	Gly	Ala	Leu	Gln	Gln	Pro	Arg	Ala	Pro	Arg	Ser	Gly
				650					655					660
Arg	Leu	Gln	Glu	Arg	Ala	Glu	Gln	Val	Ala	Arg	Ala	Leu	Gln	Pro
				665					670					675
Ala	Leu	Asp	Ser	Tyr	Phe	His	Pro	Pro	Gly	Thr	Pro	Ala	Pro	Gly
				680					685					690
Arg	Gly	Val	Gly	Pro	Gly	Ala	Gly	Pro	Gly	Ala	Gly	Asp	Gly	Thr
				695					700					705

<210> 163

<211> 2478

<212> DNA

<213> Homo. sapiens

<400> 163

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 ccacttagag cccaggtca accgaccca ccaaatgcac ctgtaggga 250  
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 tgcctcttct gtcattgttc aaaggtggga agagagcctg gaaaagaacc 1900  
 atgcttgaaa aagaaccaga aggaggctgg gcagaaccag acaaacctgc 1950  
 attcttgcca aggccagggc cagcaggacg gcaggactct agggaggggg 2000  
 gggcctgcca gctcattccc agccagggca actgcctgac gttgcacgat 2050  
 ttcagcttca ttctctgat agaacaaagc gaaatgcagg tccaccaggg 2100  
 agggagacac acaagccttt ttggaaggca ggagtttcag acctatctct 2150  
 gagaatgggg ttgaaagga aggttagggc tctggccctt ggcaggctac 2200  
 aataacacac tgtactgatg tcacaacttt gcaagctctg ccttgggttc 2250  
 agcccatctg ggtcctaaat ccagcctcac cactcacaag ctgtctgact 2300  
 tcaaaccaat gaaatcagtg ccagaaacct cggtttctct atctgtaatg 2350  
 tgggagatcat aacacctacc tcatggagtt gggtgaaga tgaatgaag 2400  
 tcatgtcttt aaagtgccta atagtgccctg gcacatgggc agtgcccaat 2450  
 aaagcttagc tatttaaaaa aaaaaaaa 2473

1100 164  
 1110 574  
 1120 FRT  
 1130 Hinc Sapien

1100 164  
 Met Arg Thr Leu Leu Thr Ile Leu Thr Val Gly Ser Leu Ala Ala  
 1 5 10 15  
 His Ala Pro Glu Asp Pro Ser Asp Leu Leu Gln His Val Lys Phe  
 20 25 30  
 Gln Ser Ser Asn Phe Glu Asn Ile Leu Thr Trp Asp Ser Gly Pro  
 35 40 45  
 Glu Gly Thr Pro Asp Thr Val Tyr Ser Ile Glu Tyr Lys Thr Tyr  
 50 55 60  
 Gly Glu Arg Asp Trp Val Ala Lys Lys Gly Cys Gln Arg Ile Thr  
 65 70 75  
 Arg Lys Ser Cys Asn Leu Thr Val Glu Thr Gly Asn Leu Thr Glu  
 80 85 90  
 Leu Tyr Tyr Ala Arg Val Thr Ala Val Ser Ala Gly Lys Arg Ser  
 95 100 105  
 Ala Thr Lys Met Thr Asp Arg Phe Ser Ser Leu Gln His Thr Thr

110	115	120
Leu Lys Pro Pro Asl Val Thr Cys Ile Ser Lys Val Arg Ser Ile 115	120	125
Gln Met Ile Val His Pro Thr Pro Thr Pro Ile Arg Ala Gly Asp 140	145	150
Gly His Arg Leu Thr Leu Glu Asp Ile Pro His Asp Leu Phe Tyr 155	160	165
His Leu Glu Leu Gln Val Asn Arg Thr Tyr Gln Met His Leu Gly 170	175	180
Gly Lys Gln Arg Glu Tyr Glu Phe Phe Gly Leu Thr Pro Asp Thr 185	190	195
Glu Phe Leu Gly Thr Ile Met Ile Cys Val Pro Thr Trp Ala Lys 200	205	210
Glu Ser Ala Pro Tyr Met Cys Arg Val Lys Thr Leu Pro Asp Arg 215	220	225
Thr Trp Thr Tyr Ser Phe Ser Gly Ala Ile Leu Phe Ser Met Gly 230	235	240
Phe Leu Val Ala Val Leu Cys Tyr Leu Ser Tyr Arg Tyr Val Thr 245	250	255
Lys Pro Pro Ala Pro Pro Asn Ser Leu Asn Val Gln Arg Val Leu 260	265	270
Thr Phe Gln Pro Leu Arg Phe Ile Gln Glu His Val Leu Ile Pro 275	280	285
Val Phe Asp Leu Ser Gly Pro Ser Ser Leu Ala Gln Pro Val Gln 290	295	300
Tyr Ser Gln Ile Arg Val Ser Gly Pro Arg Glu Pro Ala Gly Ala 305	310	315
Pro Gln Arg His Ser Leu Ser Glu Ile Thr Tyr Leu Gly Gln Pro 320	325	330
Asp Ile Ser Ile Leu Gln Pro Ser Asn Val Pro Pro Pro Gln Ile 335	340	345
Leu Ser Pro Leu Ser Tyr Ala Pro Asn Ala Ala Pro Glu Val Gly 350	355	360
Pro Pro Ser Tyr Ala Pro Gln Val Thr Pro Glu Ala Gln Phe Pro 365	370	375
Phe Tyr Ala Pro Gln Ala Ile Ser Lys Val Gln Pro Ser Ser Tyr 380	385	390
Ala Pro Gln Ala Thr Pro Asp Ser Trp Pro Pro Ser Tyr Gly Val 395	400	405
Cys Met Gln Gly Ser Gly Lys Asp Ser Pro Thr Gly Thr Thr Ser 410	415	420
Ser Pro Lys His Leu Arg Pro Lys Gly Gln Leu Gln Lys Glu Pro		

435	430	435
Pro Ala Gly Ser Cys Met Leu Gly Gly Leu Ser Leu Gln Glu Val		
440	445	450
Thr Ser Leu Ala Met Glu Glu Ser Gln Glu Ala Lys Ser Leu His		
455	460	465
Gln Pro Leu Gly Ile Cys Thr Asp Arg Thr Ser Asp Pro Asn Val		
470	475	480
Leu His Ser Gly Glu Glu Gly Thr Pro Gln Tyr Leu Lys Gly Gln		
485	490	495
Leu Pro Leu Leu Ser Ser Val Gln Ile Glu Gly His Pro Met Ser		
500	505	510
Leu Pro Leu Gln Pro Pro Ser Gly Pro Cys Ser Pro Ser Asp Gln		
515	520	525
Gly Pro Ser Pro Trp Gly Leu Leu Glu Ser Leu Val Cys Pro Lys		
530	535	540
Asp Glu Ala Lys Ser Pro Ala Pro Glu Thr Ser Asp Leu Glu Gln		
545	550	555
Pro Thr Glu Leu Asp Ser Leu Phe Arg Gly Leu Ala Leu Thr Val		
560	565	570
Gln Trp Glu Ser		

<110> 165  
 <111> 1060  
 <112> DNA  
 <113> Homo Sapien.

5400> 165  
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 gtggccacaa catggctggc ggcgcggggc tgcctctctg gctgttcgtg 150  
 ctgggggggc tctgggtggg cccggggcag tccatctca gccacggacg 155  
 gctttctctg gacctcaag tctgcgggga cgaagagtgc agcatgttaa 200  
 cgtaccgtgg gaaagtctt gaagacttca cgggcctga ttgtctttt 250  
 gtgaatttta aaaaaggtga cgatgtatat gtctactaca aactggcagg 300  
 gggatccctt gaactttggg ctggaagtgt tgaacacagt tttggatatt 350  
 ttccaaaaga tttgatcaag gtaacttcata aatacacgga agaagagcta 400  
 catattccag cagatgagac agactttgtc tgccttgaag gaggaagaga 450  
 taattttaat agttataatg tagaagagct tttaggatct ttggaactgg 500  
 ccaactctgt acatgagga tccaaagaa cttggcggc tctcagaa 550  
 agagagaaat ctctcgagga gtctcggggg cgtgaacttg aactgtgac 600  
 tgagcccgag gaattcagag ctgattcaga ggaaggagaa ggtgcttct 650

cagagagccac cgagggggtg cagggacagc cctcagctca ggagagccac 700  
 cctcacacca gcggtccgcg ggcatacgt cagggagtgc agtcttcgtt 750  
 ggacaccttt gaagaaatc tgcacgataa attganagtg cggggaagcg 800  
 aaagcagaac tggcaatagt tctctgcct cgggtgagcg ggagaagaca 850  
 gatgcttaca aagtcctgaa aacagaaatg agtcagagag gaagtggaca 900  
 gtgrgttatt cattacagca aaggatttgc ttggcatcaa aatctaagtt 950  
 tgttttacaa agattgttt tagtactaag ctgccttggc agtttgcatt 1000  
 tttgagccaa acaaaatat attattttcc cttctaagta aaaaaaaaaa 1050  
 aaaaaaaaaa 1060

<10> 166  
 <11> 333  
 <12> PRT  
 <13> Homo Sapien

<100> 166  
 Met Ala Ala Ala Pro Gly Leu Leu Phe Trp Leu Phe Val Leu Gly  
 1 5 10 15  
 Ala Leu Trp Trp Val Pro Gly Gln Ser Asp Leu Ser His Gly Arg  
 20 25 30  
 Arg Phe Ser Asp Leu Lys Val Cys Gly Asp Glu Glu Cys Ser Met  
 35 40 45  
 Leu Met Tyr Arg Gly Lys Ala Leu Glu Asp Phe Thr Gly Pro Asp  
 50 55 60  
 Cys Arg Phe Val Asn Phe Lys Lys Gly Asp Asp Val Tyr Val Tyr  
 65 70 75  
 Tyr Lys Leu Ala Gly Gly Ser Leu Glu Leu Trp Ala Gly Ser Val  
 80 85 90  
 Glu His Ser Phe Gly Tyr Phe Pro Lys Asp Leu Ile Lys Val Leu  
 95 100 105  
 His Lys Tyr Thr Glu Glu Glu Leu His Ile Pro Ala Asp Glu Thr  
 110 115 120  
 Asp Phe Val Cys Phe Glu Gly Gly Arg Asp Asp Phe Asn Ser Tyr  
 125 130 135  
 Asn Val Glu Glu Leu Leu Gly Ser Leu Glu Leu Glu Asp Ser Val  
 140 145 150  
 Pro Glu Glu Ser Lys Lys Ala Glu Glu Val Ser Gln His Arg Glu  
 155 160 165  
 Lys Ser Pro Glu Glu Ser Asn Gly Arg Glu Glu Asp Phe Val Pro  
 170 175 180  
 Glu Pro Glu Ala Phe Arg Ala Asp Ser Glu Asp Gly Glu Gly Ala  
 185 190 195

Phe	Ser	Glu	Ser	Thr	Glu	Gly	Leu	Gln	Gly	Gln	Pro	Ser	Ala	Gln
				200					205					210
Glu	Ser	His	Pro	His	Thr	Ser	Gly	Pro	Ala	Ala	Asn	Ala	Gln	Gly
				215					220					225
Val	Gln	Ser	Ser	Leu	Asp	Thr	Phe	Glu	Glu	Ile	Leu	His	Asp	Lys
				230					235					240
Leu	Lys	Val	Pro	Gly	Ser	Glu	Ser	Arg	Thr	Gly	Asn	Ser	Ser	Pro
				245					250					255
Ala	Ser	Val	Glu	Arg	Glu	Lys	Thr	Asp	Ala	Tyr	Lys	Val	Leu	Lys
				260					265					270
Thr	Glu	Met	Ser	Gln	Arg	Gly	Ser	Gly	Gln	Cys	Val	Ile	His	Tyr
				275					280					285
Ser	Lys	Gly	Phe	Arg	Trp	His	Gln	Asn	Leu	Ser	Leu	Phe	Tyr	Lys
				290					295					300

Asp Cys Phe

<210> 167  
 <211> 270  
 <212> DNA  
 <213> Homo Sapien

<210> 167  
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 agagagcaa aggcagagg tgtggtccaa ggcgggctt ctgcttcgca 100  
 tctgggcat acaggggacc ccttaacttc agtccccaa aggcgcaccc 150  
 tcgagcttt gaactccagc ccgcacatc cagcgcgggc acaggcgagg 200  
 cagcgggcag gtccggggcg aaggcgatgc ggcagggggc tcgggcagct 250  
 gggctcgggc ggcgggagta gggccgggca ggcagggcag gaggtcgcac 300  
 attcagagtc gggggtggc cctggggcag aggcggcctt cgtccacgca 350  
 aacacctgt gctgcacagc cgcggcgatg agcgggtggc tctcgtctgt 400  
 gctggggccc ggcctgctct ggggcacagg agctttctgc cgcgcgctgg 450  
 tcaaggjca aaaggtgtgt tttgctgact tcaagcctcc ctgctacaaa 500  
 atggcctact tccatgaact gtccagccga gttagctttc aggaggcagc 550  
 ccttgcttgt gagagtgagg gaggagctct ccacagcctt gagaatgaag 600  
 cagaacagaa gttaatagag agcatgttgc aaacactgac aaaaccggg 650  
 acagggattt ctgatgggta tttctggata gggcttggga ggaatggaga 700  
 tgggcacaca tctggtgctt ggcagatct ctacagagg tctgattaaa 750  
 gcaattccca gtaccgaaac tggtagacag atgaaccttc ctgcgggaagt 800

gaaaagtgtg ttgtgatgta tcaccaacca actgccaate ctggccttgg 850  
 gggtcoccta : ctttaccagt ggaatgatja caggtgtaac atgaagcaca 900  
 atttatattt; caagtatgaa ccagagatta atccacacag cctgttagaa 950  
 aagccttato ttacaaatca accaggagac acccatcaga atgtggttgt 1000  
 tactgaagca ggtataatto ccaatetaat ttatgtttgtt ataccaacaa 1050  
 taccctgtgt cttactgata ctggttgtct ttggaacctg ttgtttccag 1100  
 atgtctgata aaagtaaagg aagaacaaaa actagtccaa accagtctac 1150  
 actgtggatt tcaaagagta ccagaaaaaga aagtggcatg gaagtataat 1200  
 aactcattga cttggttcca gaattttgta attctggatc tgtataagga 1250  
 atggcatcag aacaatagct tggaaagggt tgaatcaca aaggtatctg 1300  
 aagaagcaat gtaagctccc cttgaggga aatattaaag taatttttat 1350  
 atgttatata ttccatttaa agaataatgt gtgctaataa tggagtgaag 1400  
 catgttact ttgctaaagg atgcacccaa acttcaaat tcaagcaaat 1450  
 gaaatggaca atgcagataa agttgttato aacacgtcgg cagtatgtgt 1500  
 gttagaagca attcctttta ttctttccac ctttcataag ttgttatata 1550  
 gtcaatgtaa tgtatattgt attgaaattt acagtgtgca aaagtatttt 1600  
 acccttgcac aagtgtttga taaaaatgaa ctgttctaatt atttattttt 1650  
 atggcatctc atttttcaat acatgctctt ttgattaaag aaattatta 1700  
 ctgttgcata ctgaattcac acacacacaa ataatgtac atagaaaaag 1750  
 tttgttttct cgaataatt cactttccag cttctctgtt ttgggtcaat 1800  
 gtctaggaaa tctcttcaga aataagaagc tatttcatta agtgtgatat 1850  
 aaacctcttc aaacatttta cttagaaggca aggtattgtc aatttcaatt 1900  
 gtgcaagaca tgtgccttat aattattttt agcttaaat taaacagatt 1950  
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 ttgcctatat aatgagaagg agctctctga gggttctgaa atcaatgtgg 2100  
 tccctctctt gcccaactaaa caaagatggt tgttcggggg ttgggattga 2150  
 cactggaggc agatagttgc aaagttagtc taagttttcc ctagtgtat 2200  
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 ggaaggaaaq gaactacgaa atcgtgtgaa aatgggttgg aaccatcag 2350  
 tgatgcata ttcattgatg aggttttgtt tgagatagaa aatgggtggt 2400



cctttctgtc ttatctctta gttttcttcaa tgccttagcc ttgtttctct 2450  
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 aaccacaataa agagttctctg tttctggggg aaaaaa aaaaaa aaaaaa 2550  
 aaaaaa aaaaaa 2570

02100 168  
 02110 273  
 02120 PFT  
 02130 Homo Sapien

04000 168  
 Met Ser Arg Val Val Ser Leu Leu Leu Gly Ala Ala Leu Leu Cys  
 1 5 10 15  
 Gly His Gly Ala Phe Cys Arg Arg Val Val Ser Gly Gln Lys Val  
 20 25 30  
 Cys Phe Ala Asp Phe Lys His Pro Cys Tyr Lys Met Ala Tyr Phe  
 35 40 45  
 His Gln Leu Ser Ser Arg Val Ser Phe Gln Glu Ala Arg Leu Ala  
 50 55 60  
 Cys Glu Ser Glu Gly Gly Val Leu Leu Ser Leu Glu Asn Glu Ala  
 65 70 75  
 Glu Gln Lys Leu Ile Glu Ser Met Leu Gln Asn Leu Thr Lys Pro  
 80 85 90  
 Gly Thr Gly Ile Ser Asp Gly Asp Phe Trp Ile Gly Leu Trp Arg  
 95 100 105  
 Asn Gly Asp Gly Gln Thr Ser Gly Ala Cys Pro Asp Leu Tyr Gln  
 110 115 120  
 Trp Ser Asp Gly Ser Asn Ser Gln Tyr Arg Asn Trp Tyr Thr Asp  
 125 130 135  
 Glu Pro Ser Cys Gly Ser Glu Lys Cys Val Val Met Tyr His Gln  
 140 145 150  
 Pro Thr Ala Asn Pro Gly Leu Gly Gly Pro Tyr Leu Tyr Gln Trp  
 155 160 165  
 Asn Asp Asp Arg Cys Asn Met Lys His Asn Tyr Ile Cys Lys Tyr  
 170 175 180  
 Glu Pro Glu Ile Asn Pro Thr Ala Pro Val Glu Lys Pro Tyr Leu  
 185 190 195  
 Thr Asn Gln Pro Gly Asp Thr His Gln Asn Val Val Val Thr Glu  
 200 205 210  
 Ala Gly Ile Ile Pro Asn Leu Ile Tyr Val Val Ile Pro Thr Ile  
 215 220 225  
 Pro Leu Leu Leu Leu Ile Leu Val Ala Ile Gly Thr Cys Cys Thr  
 230 235 240

Gln	Met	Leu	His	Lys	Ser	Lys	Gly	Arg	Thr	Lys	Thr	Ser	Pro	Asn
				245					250					255
Gln	Ser	Thr	Leu	Trp	Ile	Ser	Lys	Ser	Thr	Arg	Lys	Glu	Ser	Gly
				260					265					270
Met	Glu	Val												

110-169  
 111-43  
 112-DNA  
 113-Artificial Sequence

120-  
 123-Synthetic oligonucleotide probe

100-169  
 agaaaacga cggccagtta aatagacctg caattattaa tct 43

110-170  
 111-41  
 112-DNA  
 113-Artificial Sequence

120-  
 123-Synthetic oligonucleotide probe

100-170  
 agaaaacag ctatgaccac ctgcacacct gcaaatacat t 41